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Østergaard, Annemarie

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THE ENTREPRENEURIAL PERSONALITIES

A STUDY OF PERSONALITY TRAITS AND LEADERSHIP
PREFERENCES OF ENTREPRENEURS

BY
ANNEMARIE ØSTERGAARD

DISSERTATION SUBMITTED 2017



AALBORG UNIVERSITY
DENMARK

THE ENTREPRENEURIAL PERSONALITIES

A study of personality traits and leadership
preferences of entrepreneurs

Annemarie Østergaard



AALBORG UNIVERSITY
DENMARK

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PhD supervisor: Professor Svetla T. Marinova
Aalborg University

PhD committee: Head of Department Birgitte Gregersen (formand)
Aalborg University

Professor of Management Peter Jones
University of Gloucestershire

Associate Professor Radoslaw Wolniak
Warsaw University,

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PART I

FOREWORD

From time to time, we meet charismatic people who seems to be quite normal and yet somehow also unusual. They talk, think and behave differently but not strangely. Additionally, they have achieved more than average: for some in money, for others in specific knowledge, fame or wisdom.

Since charisma and similar characteristics are hard to measure separately in research; my choice was to investigate entrepreneurs as very much representative for almost-ordinary people that achieve more and different from others.

In this survey, 55 active and different entrepreneurs provide novel specific knowledge and novel coherency of core common features. The relevance of this information is consolidated through the current status of ongoing entrepreneurial activities, some very successful and some less, and the validity is proved across the diversity of entrepreneurs in age, branches and business.

The analysis of these 55 cases is based upon my interest in finding the ultimate explanation of the balance between the importance of innate predispositions and the impact from environmental relations and circumstances in regard to becoming and functioning as an entrepreneur. I realise however that this motive will give me the opportunity to continue my research for a long time to come. Consequently, this research outlines only one milestone on my academic journey.

Finally, I would like to thank for all the answers to the endless amount of questions I have been asking outstanding people on my way.

Annemarie Østergaard

SUMMARY

The objective of the research is to investigate what constitutes the entrepreneurial personality in terms of innate and learned personality characteristics and how these relate to environmental impact and leadership. The thesis argues that an entrepreneurial personality is a combination of traits that are embedded in nature and nurture.

Founded on a cross-disciplinary literature review with relevant sources from psychology, economics, leadership and entrepreneurship, the thesis develops an a priori framework for the study that is founded on extant research. Based on the theoretically-driven conceptualization, data were collected from 55 active entrepreneurs' primarily located in Nupark, Holstebro, in Denmark. The selected population of entrepreneurs completed a 2-hour standardised and validated personality test measuring 36 personality traits, a leadership preference test with 27 leadership roles, and a questionnaire discovering the respondents' background. These double-tested data provided significant and robust results that were further analysed in relation to the characteristics of the respondents such as role models, expertise due to deliberate practice for at least 10,000 hours, and life-changing events.

During the process of mapping the entrepreneurial personality, the concepts were initially unclear. Moreover, a literature review of entrepreneurship and leadership uncovered a lack of interest at the individual level in high-ranked journals. One of the reasons is explained by insufficient measurement methods due to use of diverse definitions. Hence, the thesis develops the concepts of entrepreneur, personality and entrepreneurial leader. Concurrently, empirically and theoretically based models are constructed that are the foundation for future measurement of entrepreneurs' personality.

Additionally, the thesis suggests that the concept of an entrepreneur should be divided into three different categories: Self-employed, Business owner and Entrepreneur. Within the entrepreneur category, four typologies are displayed: Synnovation Entrepreneur and Team Entrepreneur, Adventurer and Rebel, each of which is described according to the empirical findings. Furthermore, the research finds that the set of personality traits necessary for an entrepreneur consists of Autonomy, Exploration Drive, Preparedness for Change, and Self-preservation Instinct.

In conclusion, to answer the research question regarding the constitution of the entrepreneurial personality, it appears that the entrepreneurial traits are the origin of an entrepreneur and the environment shapes how and when the entrepreneurial activity emerges. Moreover, leadership defines the nature and extent of the entrepreneurial activity and whether it takes place at all.

RESUME

Formålet med dette forskningsprojekt er at undersøge, hvilke medfødte og tillærte faktorer iværksætterpersonligheden består af i forhold til omgivelsernes påvirkning og lederskab. Afhandlingen argumenterer for, at en iværksætterpersonlighed er en kombination af personlighedstræk, der er rodfæstet i gener og læring.

Med udgangspunkt i den tværdisciplinære litteratur med relevante kilder fra psykologi, økonomi, lederskab og entrepreneurskab udvikler afhandlingen en a priori forståelsesramme baseret på omfattende forskning. Baseret på den teoretiske konceptualisering er der indsamlet data fra 55 aktive iværksættere primært med domicil i Nupark, Holstebro. Populationen af iværksættere har over to timer gennemført en standardiseret og valideret personlighedstest med 36 personlighedstræk, en lederskabspræferencetest med 27 lederroller samt et spørgeskema, der udforsker deltagerens baggrund. Disse dobbeltverificerede data viser signifikante og solide resultater, der yderligere er analyseret i forhold til deltagerens karakteristika som eksempelvis rollemodeller, ekspertiser gennem 10.000 timers praksis og livsforandrende begivenheder.

I processen med at kortlægge iværksætterens personlighed ses, at flere nøglebegreber som udgangspunkt er uklare. Desuden fremgår det af litteraturundersøgelsen af iværksætteri og lederskab, at der er manglende interesse for det individuelle niveau i de højest rangerende tidsskrifter. En af årsagerne kan forklares med utilstrækkelige målemetoder på grund af uensartede definitioner. Det har medført opdaterede definitioner af begreberne iværksætter, personlighed og iværksætterleder. Samtidig er der konstrueret teoretisk baserede modeller, der understøtter fremtidige målinger af iværksætteres personlighed.

Derudover foreslås, at begrebet Iværksætter opdeles i tre adskilte kategorier: Selvstændig, Ejerleder og Iværksætter. Iværksætterkategorien består af fire typer: Synnovator-iværksætter, Team-iværksætter samt Eventyreren og Rebellen, der hver især er beskrevet ud fra det empiriske materiale. Forskningsresultaterne viser desuden, at det nødvendige sæt af personlighedstræk for en iværksætter består af: Selvstændighed, Udforskningstrang, Forandringsparathed og Selvopholdelsesdrift.

Som svar på forskningsspørgsmålet, hvad den entreprenante personlighed består af, er konklusionen, at iværksætterpersonlighedstræk er fundamentale for en iværksætter, og at omgivelserne former, hvordan og hvornår iværksætteriet begynder. Desuden er det iværksætterens ledelsesevner, der bestemmer dels om en aktivitet iværksættes og dels arten og omfanget af aktiviteten.

ACKNOWLEDGEMENTS

This research was only accomplished as a result of trust, support and a lot of work. Obviously, the trust and support from Peter Kjeldbjerg and Peter Petersen, with funding from Nupark, together with Lene Christensen and Benjamin Galacho, with funding from the Bach Group, was fundamental for even beginning this project. I am truly grateful for your belief in me and the research project.

The affiliation to Aalborg University was initially established with trust and support from Birgitte Gregersen, the best Head of Department ever. Professor Michael S. Dahl gave me useful comments from which I learned a lot together with colleagues from the research groups EOB and IKE. Also, special thanks to Jeanette Hvarregaard and Dorthe Baymler. Professor Helle Neergaard gave me an exceptional opportunity to join the iCARE research group at Aarhus University working with the intersection of leadership and entrepreneurship together with Kathleen Wagner. Finally, Professor Svetla Marinova has been the most valuable supervisor from which I have received useful advices and guidance. I have completed this project owing to your help.

In addition, I would like to express my gratitude to the 55 entrepreneurs from Nupark in Holstebro, Business Park Struer and KASK, who willingly decided to participate in the survey on which this research is based. Also, I am indebted to Allan Holst and Eva Lindegaard Hansen from Region Midtjylland for the cooperation regarding KASK.

I have met numbers of skilled people who gladly and with interest have been supportive on my academic journey with among others SurveyXact, SPSS and in every other urgent matter. The valuable scholarly discussions with colleagues in research groups, Ph.D. Student groups, groups with extraordinary entrepreneurial interest and in courses and seminars, I have attended, shaped me and the research project. You are all part of my future.

The theoretical findings and empirical results have been presented in various versions at psychological, economic and entrepreneurial learning conferences and seminars. These include: European University Network on Entrepreneurship (ESU) conferences, DRUID Academy and Society conferences, 7th Conference on Performance Measurement and Management Control, 15th and 16th ISS Schumpeter Conference, 3E-ECSB 2014, SPRU DPhil Day 2014, ICSB 2014 World Entrepreneurship Conference, 28th International Conference of Applied Psychology, International Network of Business & Management Journals 2014, ISBE 2014 Annual Conference, and the 13th and 14th European Congress of Psychology. The constructive criticism I have received from discussants, participants and scholars inspired me in developing models and refining analyses further towards the presented significant results.

Finally, I would like to thank my husband Per, who continuously trusted in me and encouraged me to pursue my goal. We have had great discussions and collaborations on the research design and the measurement of personality and leadership.

PART I

To
Maria, Malene, Simon and Monica,
the sunshine of my life

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PART I

Introduction of the literature

PROLOGUE

Throughout my life, I have been fascinated by why and how some seemingly ordinary people, and not others, achieve more than average. In my career, I have met some of these high-achievers in different circumstances and in various stages of their success and failure. They are the inspiration for this in-depth scientific study.

The purpose was to motivate unemployed young people to go into education or vocational training at the time when I was Principal of a production school when coping strategies became a pivotal tool in changing young people's lives towards a better future. For instance, a capable youngster who suffered from not fitting into the current environment became a cartoonist when removed to a creative milieu. The coping focus and the skill-based allocation strategy demonstrated for me that learning and environmental support has a positive impact.

Being a school psychologist elucidated for me the indisputable qualities and benefits of standardised tests and how testing with adequate measurement tools facilitates identifying invisible patterns and distinguishes individuals on different parameters to

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capture human diversity in a non-judgmental manner. Furthermore, the standardised tests accurately pinpoint problems and gaps, and concurrently deliver targeted solutions and treatments.

I learned the importance of treating entrepreneurs individually with an objective of lasting growth while working as a business and innovation officer for a municipality in Denmark. In addition, preassembled courses for SMEs only achieve desired results when the courses leave room for tailor-made solutions adapted to the needs of the enterprises and the challenges faced by entrepreneurs' current.

Consequently, my research of the entrepreneurial personality respects the diversity of entrepreneurs while research curiously leaves no stone unturned.

CHAPTER 1. INTRODUCTION

“It Is Perfectly True, as Philosophers Say, That Life Must Be Understood Backwards. But They Forget the other Proposition, That It Must Be Lived Forwards. Then, Thoroughly Thought, Life Never Really Becomes Understandable, Thus, I Never Find a Moment Enough Quiet to Enter in the Position: Backwards.”

Søren A. Kierkegaard¹

The purpose of this research is to enhance the knowledge of the entrepreneurial personality and to clarify the concepts involved, the characteristics used, and to map the ways of being an entrepreneur. The need for clarification is linked to failed investigations due to a “home brew” of only a few, inaccurate or common-sense personality variables that were used to explain the entrepreneurial status (Davidsson (2005, 2007, 2008). Consequently, this investigation concerns the constitution of an entrepreneur’s personality, the concepts involved and the framework in which an entrepreneurial personality belongs. In addition, a renewed focus on the entrepreneurial personality includes taking into account the measurement methods. Hence, future entrepreneur research might decide to return to McClelland (e.g. 1967) and continue his investigations of the entrepreneurial personality in opposition to Gartner (1988), who prompted a paradigm shift in the entrepreneurial research claiming that entrepreneurship is a role one undertakes to create organisations.

1.1 SCOPE AND PURPOSE

The scope of the study is clearly to explore the entrepreneurial personality due to the author’s personal fascination with who the entrepreneur is, as well as an increasing interest in policy-makers, universities and society at large to support entrepreneurs and nurture more and more successful entrepreneurs. The notion is that at the core of improving an entrepreneur’s entrepreneurial ability, lies the entrepreneur, the person with the entrepreneurial sprout, which is the entrepreneurial personality. Nevertheless, extant research has not been able to offer an in-depth viable explanation of entrepreneurial personality. Explorative research of the entrepreneurial personality has to cross scientific disciplines to even begin mapping the personality of an entrepreneur.

Accordingly, the starting point is to investigate the entrepreneur as an individual who, in a Schumpeterian wording, destroys equilibrium with a creative new idea

¹In Danish: Det er ganske sandt, hvad Philosophien siger, at Livet maa forstaaes baglænds. Men derover glemmer man den anden Sætning, at det maa leves forlænds. Hvilken Sætning, jo meer den gjenemtænkes, netop ender med, at Livet i Timeligheden aldrig ret bliver forstaaeligt, netop fordi jeg intet Øieblik kan faae fuldelig Ro til at indtage Stillingen: baglænds.

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(Schumpeter, 1931) or destroy the normative balance to display discontinuity (Bull & Willard, 1993). In either way, individual entrepreneurs enter the society now and then with nothing but an idea, and with their abilities they change a specific part of the society substantially. The entrepreneur being unique and concurrently similar to other entrepreneurs possesses an entrepreneurial personality. This kind of personality is the subject of investigation for its uniqueness and its similarity across individuals within the frame of being an entrepreneur.

1.2 RESEARCH QUESTIONS

Since an entrepreneurial personality simultaneously can be possessed by several people and characterises the uniqueness of an individual, the scope of this research is to investigate first, how this is possible and second, what are the characteristics encompassing the entrepreneurial personality by mapping how the entrepreneurial personality is constituted that make the entrepreneurial endeavour possible.

Accordingly, the main research question is bound to bring forward the profound essence of the entrepreneur and is formulated as:

How is the entrepreneurial personality constituted?

In order to answer this main research question, sub-questions are formulated that help to conduct the investigation in terms of identify and discuss applicable key factors.

From a psychological perspective, the entrepreneurial personality naturally relates to an entrepreneur, but in general the personality is a psychological concept for all human beings with individual differences and common abilities. Hence, the first sub-question deals with the knowledge retrieved from the psychological research field to add valuable knowledge to the main question:

What is the psychological core of the entrepreneurial personality?

Highly specialised clusters with great companies as Silicon Valley attract innovative people and might even foster some. Surely, these environments are subjects of research to reveal for instance how to nurture an increased number of entrepreneurial individuals. The discussion of nature and nurture is addressed by the second sub-question:

How do nature and nurture interact shaping the entrepreneurial personality?

The ability to undertake entrepreneurial activities comprises the ability to be in charge and lead someone or something somewhere, which could also be called leadership. The ability of leadership in relation to an entrepreneur who manages to lead an idea into a business seems highly relevant in finding the key components that constitute an entrepreneur. The third sub-question deals with the knowledge retrieved from this relationship:

What is the relationship between leadership and entrepreneurial personality?

CHAPTER 1. Introduction

The sub-questions and the research question are dealt with theoretically and empirically as described in the next section.

1.3 STRUCTURE OUTLINE

This section outlines the structure of the thesis, which is divided into three main parts: first, the introduction part with the theoretical background to the research problem; second, the empirical part, and finally, the discussion, conclusion and contributions to knowledge. Certainly, the points of the entrepreneurial personality are outlined as minor as well as main theoretical and empirical contributions in the respective chapters.

The first part of the thesis consists of Chapter One through Chapter Four and introduces the theoretical background, survey's rationale, the research strategy and design.

Chapter One introduces the field of research and presents the research agenda with the main research question and the structure of the thesis.

Chapter Two and Chapter Three form the theoretical body of the research with a comprehensive literature review in Chapter Two that leads to conceptualization in Chapter Three. Thus, Chapter Two deals with the cross-disciplinary research field and examines the psychological framing of entrepreneurs, the entrepreneur in entrepreneurship, and the entrepreneurial personality, emphasising the concept of personality and ending with the measurement conditions. Afterwards, two major topics regarding entrepreneurs are explored, namely, the external influences on the entrepreneur and the importance of including leadership in understanding an entrepreneur.

The theoretical and paradigmatic discussion in Chapter Two establishes the basis for constructing the a priori framework for the survey, the research question with sub-questions, and clarifies the key concepts for the empirical analysis of the results.

Chapter Four outlines the research methodology consisting of the philosophy of science and the method used for data collection and analysis. Furthermore, the empirical cohort is introduced, considering the validity and bias of the survey and measurement instruments.

The second part is the empirical body of the thesis and consists of Chapter Five through Chapter Seven. The empirical results from the entrepreneurial cohort are presented and arguments made for a holistic measurement to enhance the analyses of the empirical results.

Chapter Five aims to answer the sub-question “*What is the psychological core of the entrepreneurial personality?*” and addresses the personality, specifically by revealing focal points of the entrepreneurial personality through the personality test results and a factor analysis that outlines nine entrepreneurial types.

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Chapter Six addresses the concept of leadership according to the sub-question: “*What is the relationship between leadership and entrepreneurial personality?*” by presenting the preferred leadership behaviour of entrepreneurs that is explored and analysed thoroughly. Thereby, the entrepreneurial leader is explored in relation to the preferred leadership role and behavioural encodings.

In Chapter Seven, the empirical reflections induce correlation analyses of the cohort of active entrepreneurs in relation to leadership behaviour and personality traits. Thereby, theoretical conventions are verified and developed further. Additionally, the external influences are handled by the questionnaire results in relation to the entrepreneurial respondents answering the third sub-question “*How do nature and nurture interact shaping the entrepreneurial personality?*”. Hence, the life of an entrepreneur is marked by selected crucial impacts, including the imprint and the stages during the upbringing, the role models, life-changing events, and deliberate practice of more than 10,000 hours. Furthermore, an example is offered for how the development of an active entrepreneur might proceed.

The third and final part of the thesis consists of Chapter Eight and Chapter Nine, where the main findings, the contributions and the conclusion are presented.

Chapter Eight describes the foundation for the answer to the main research question “*How is the entrepreneurial personality constituted?*” by means of summarising the essence of the previous chapters on the basis of the research outcomes that enable a conceptual interpretation of the Entrepreneurial Personality. Finally, through the analysis conducted to answer the research question, a new theoretical framing of the entrepreneurial personality evolves.

Chapter Nine is constituted by the conclusion of the thesis with a presentation of the conclusive findings about personality, environmental impact, and leadership in relation to the entrepreneurial personality. The entrepreneurial traits are the origin of an entrepreneur, the environment shapes how and when the entrepreneurial activity emerges and leadership defines the nature and extent of the entrepreneurial activity and whether it takes place at all.

Additionally, the theoretical framing of entrepreneurs is renewed, and based on entrepreneurial personalities, differentiation is made between self-employed, business owners and entrepreneurs, and further discrimination is made between the entrepreneurial types, particularly the Synnovation Entrepreneur and the Team Entrepreneur followed by the entrepreneur-to-be, known as the Adventurer and the Rebel who need support to fulfil their potential.

Finally, Chapter Nine discusses implications of this research for practitioners, academics, professionals, and policy decision makers dealing with entrepreneurs in relation to future entrepreneurial foci in research and applied management.

CHAPTER 2. THE PSYCHOLOGY OF ENTREPRENEURS

“Face the Facts of Being What You Are, For That Is What Changes What You Are.”

Søren A. Kierkegaard

Traditionally, the entrepreneurship literature relates to the academic research field of economics (Kets De Vries, 1977; Schumpeter, 1939), but a psychological view on the individual characteristics of the entrepreneur is receiving increased interest (Baum et al., 2007; Rauch & Frese, 2007a). “The key lies in the context – what came before, what comes next?” (Weick, 1995, p. 389) and effective theorising focuses on framing the debate and offers fresh insights into well-known things by importing and applying existing theories from other disciplines (Zahra, 2007). Accordingly, the research focus on the individual level through the prisms of psychology to integrate inner and outer influences on the entrepreneur, develop an insight into the relationship between the entrepreneur and leadership, and to develop a contemporary framework.

However, the traditionally entrepreneurial roots in economics are fundamental as well as the psychological approaches in order to develop this cross-disciplinary research. The increased cooperation between scholars with economic and psychological background respectively (e.g. Baum, Frese, & Baron, 2007) supports such a viewpoint.

Consequently, the literature review outlines the research field by encompassing entrepreneurial frameworks, entrepreneurial definitions and typologies, the entrepreneurial personality by a focus on the concept of personality, the measurements of personality and external influences on the personality, ending with a review of entrepreneurial leadership and the intersection of leadership and entrepreneurship.

2.1 A PSYCHOLOGICAL FRAMING OF ENTREPRENEURS

The psychology of entrepreneurs includes various ordinary psychological sub disciplines such as organisational psychology, industrial psychology, social psychology, cognitive psychology, developmental psychology and personality psychology due to fact that an entrepreneur is a person in a business context. Regardless the variety of psychological approaches, the starting point is the entrepreneur in the process of entrepreneurship understood as a common person with entrepreneurial personality characteristics and this framing needs clarification.

2.1.1 ACTION CHARACTERISTIC MODEL FRAMING THE ENTREPRENEUR

The action characteristics model of entrepreneurship (Giessen-Amsterdam model), a traditional framework by Frese and Gielnik (2014) based on their previous work is

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seen as an overall framework for the psychology of entrepreneurship. They see, more than define, an action characteristic in line with an attitude or a personality factor as one in a number of important psychological issues related to the concept of orientation itself (Frese & Gielnik, 2014, p. 422). In addition, Frese and Gielnik (2014) recommend that the domain of entrepreneurship should be acknowledged in a broader view instead of mainly focusing on financial outcomes such as profit or sales (Mayer-Haug et al., 2013).

In their model, Frese and Gielnik (2014) introduce the idea that different action characteristics of entrepreneurship are important in different phases. The first phase consists of identifying and developing a business opportunity using feedback and additional information to modify, shape, and refine the entrepreneur's idea, whether it is a product or a service, to become a viable and feasible business (Dimov, 2007). The second phase contains several start-up activities to establish viable business structures and operational procedures (Gartner, 1985), including acquiring resources and equipment that fulfil legal requirements, and developing marketing and sales strategies. The entrepreneur must test whether the product or service can attract buyers (Reynolds, 2007), and by performing start-up activities over time, the likelihood of successful new ventures increases (Carter, Gartner, & Reynolds, 1996; Lichtenstein et al., 2007). In the third phase, the survival and growth is managed by handling conflicts, negotiation of contracts, forming alliances, developing new business strategies, and so forth (Baron, 2007). As outlined in Figure 1, Frese and Gielnik further emphasise that the entrepreneurship's successful outcome depends on the performed actions by the entrepreneur that are accompanied by the feedback and the process hereof (Frese & Gielnik, 2014, p. 428).

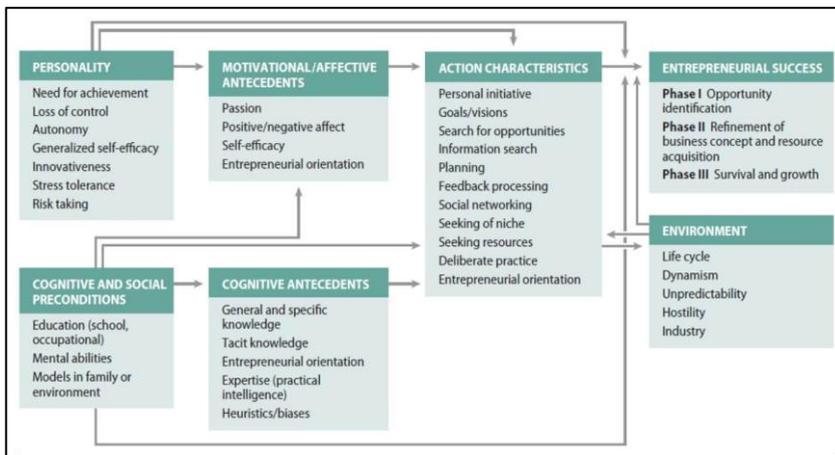


FIGURE 1 THE ACTION CHARACTERISTICS MODEL, AFTER FRESE, 2009

However, the arguments described in terms of the three phases: opportunity identification, refinement of business concept and resource acquisition, and survival and growth are intertwined according to entrepreneurial practice. Additionally, the

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concepts involved are hard to distinguish from each other. Hence, the elements need further processing, which will be done in section 3.1.1.

2.1.2 FRAMEWORK OF ENTREPRENEURS RELATED TO ECONOMIC GROWTH

Another introductory framework to consider is suggested by Wennekers and Thurik (1999), which indicates how entrepreneurs in a specific context of culture, institutions and personal conditions impact economic growth via innovation, variety, competition and personal efforts (1999):

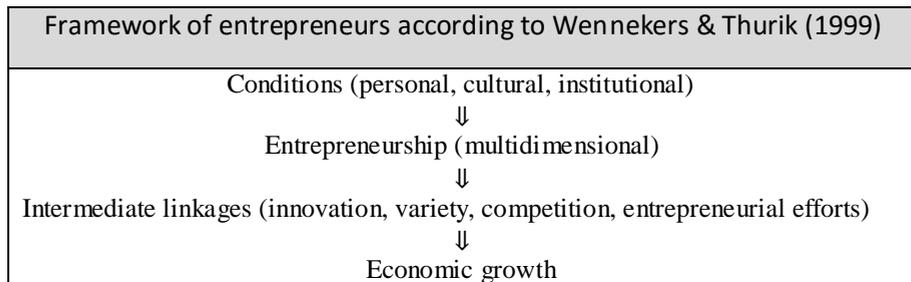


FIGURE 2 FRAMEWORK OF ENTREPRENEURS AND ECONOMIC GROWTH

The framework by Wennekers and Thurik is interesting due to the possibility of reverse application. Thus, the argument is straightforward, stating that economic growth leads towards intermediate linkages, which further leads to entrepreneurship and ends at the conditions for personal, cultural and institutional possibilities. All roads lead to Rome; however, the elements are central since they compose the collaborating factors in the framework of the process of entrepreneurship and in relation to economic growth.

In this case, the pressure is placed on the individual entrepreneur. In addition, the intermediate linkages, exemplified by innovation, variety, competition, and entrepreneurial efforts, depend on the individual entrepreneur's personality and the current quality of the entrepreneur's environment.

Regardless, Carree and Thurik argue that growth is positively related to entrepreneurial activity measured in terms of firm size and age (Carree & Thurik, 2003; Wennekers, Van Wennekers, Thurik, & Reynolds, 2005; Wennekers & Thurik, 1999) and number of enterprises and employees (Audretsch, Carree, & Thurik, 2001; Thurik, Carree, Van Stel, & Audretsch, 2008), generally, severe constraints measuring in a cross-national context might be attributable to a paucity of theoretical frameworks that link entrepreneurs to economic growth (Carree & Thurik, 2003, p. 437). Consequently, the aim is to develop a theoretical framework considering the progress of individual entrepreneurs in the society.

2.2 THE ENTREPRENEUR IN ENTREPRENEURSHIP

Baum, Frese and Baron (2007) are proponents of bringing the individual entrepreneur into entrepreneurship research with references to the following "Trying to understand

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entrepreneurship without considering entrepreneurs is like trying to understand Shakespeare without including Hamlet in the discussion” (Baumol, 1968, p. 67).

In line with this, Bull and Willard demand discontinuity in the further development of theory and call for a theory that better explains and predicts the phenomenon of entrepreneurship by including the individual level and the underlying factors due to “A person will carry out a new combination, causing discontinuity, under conditions of: task-related motivation, expertise, expectation of personal gain, and a supportive environment” (1993). Hence, the argument of the importance of the entrepreneur within the process of entrepreneurship is indisputable, the entrepreneur being the actor who creates and executes entrepreneurship as a process.

One overall obstacle in a cross-disciplinary research as “The psychology of entrepreneurs” is the inconsistency of definitions, which results in inadequate characteristics being compared and interpreted. Among the theoretical contributions, Cunningham and Lischeron (1991) conducted a literary review of six different schools of thought on entrepreneurship: a) The “Great Person” School of Entrepreneurship, b) The Psychological Characteristics School of Entrepreneurship, both of which focus on assessing personal qualities, c) The Classical School of Entrepreneurship revolving around recognizing opportunities, d) The Managing School of Entrepreneurship, e) The Leadership School of Entrepreneurship, concerning acting and managing, and f) The Intrapreneurship School of Entrepreneurship directed to reassessing and adapting.

In line with the psychological and “Great Person” schools, Cunningham & Lischeron (1991) suggest to assess the entrepreneur’s values, and in line with the classical school, they suggest to provide insights about the process of creating an opportunity. In line with the management and leadership schools, they suggest understanding the necessary interpersonal skills for making an operation efficient and for motivating people, and finally with the intrapreneurship school, they suggest assisting in redirecting the present operation. Cunningham and Lischeron stress that “it may not be prudent to suggest that our knowledge of entrepreneurs can be obtained by focusing on the criteria of only one school of thought. An understanding of entrepreneurs and their ventures requires criteria from each facet of the overall process: entrepreneurs’ personal perspective, their ways of identifying opportunities, their methods of acting and managing, and their mechanisms for adapting and reassessing” (1991, p. 58).

Hence, the optimal research design should relate the entrepreneur schools of thought and the main subjects outlined are the personality, environmental impact, and leadership, where a psychological approach integrated with a leadership approach characterise entrepreneurs more accurately.

In finding the entrepreneur in entrepreneurship, the ongoing discussion for decades of an entrepreneur versus a non-entrepreneur (e.g. Low & MacMillan, 1988; Metcalfe, 2004) has not succeeded in capturing the core personality of an entrepreneur. A first step is to leave this discussion and seek out the elements that define an entrepreneur and to study in depth what actually occurs among entrepreneurs along with what distinguishes one entrepreneur from another. Thereby the possibility of finding the

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essential patterns of similarities and differences increases. Afterwards, the clarified characteristics by means of psychological methods (Gartner, Shaver, Gatewood, & Katz, 1994) potentially have a quality that allow to distinguish between entrepreneurs and non-entrepreneurs, which in policy matters would be beneficial.

Bull and Willard (1993) lack a developed theory of entrepreneurship, which could explain or predict when an entrepreneur might appear or engage in entrepreneurship. This could be explained as the time when a potential entrepreneur judges the strength of the surrounding incentives to be sufficient and moves into action (Carree & Thurik, 2003). Unfortunately, the only one who knows the elements in the judging process is the entrepreneur-to-be. According to Bull and Willard (1993), none of the definitions have explained or predicted the entrepreneurial entrance from the many definitions of the word “entrepreneur” throughout more than 200 years of study of entrepreneurship.

Hence, they strongly recommend the adoption of Schumpeter's definition of the entrepreneur for academic and policy-making purposes due to the fact that an economic outcome-based concept has been embodied in many of the definitions for at least the last 50 years. Hence, it is important to define who the entrepreneur is.

2.2.1 THE IMPORTANCE OF AN ENTREPRENEUR DEFINITION

Among the most cited descriptions of entrepreneurs is Joseph Alois Schumpeter's “creative destructor” from his terminology launched in 1912 in the German book *Entwicklung. Theorie der Wirtschaftlichen Entwicklung*, where he heavily emphasised the personality of the entrepreneur (Andersen, 2011). Schumpeter sees the entrepreneur as a highly complex individual in opposition to the view of other economists, who see the entrepreneur as a simpleton or automaton. Hébert and Link (2009) state that Joseph Schumpeter is mostly associated with entrepreneurship in the twentieth century. This is due to his construction in “The Theory of Economic Development” around the dynamic, innovative actions of the equilibrium-disturbing entrepreneur. Furthermore, the use of the term “Schumpeterian entrepreneur” tacitly suggests that other kinds of entrepreneurs conceivably do different things. Unfortunately, only few inquiries determine the other factors related to responsible economic agents (Hébert & Link, 2009). Active dynamic behaviour is crucial as well as the innovative changes that disturb an equilibrium. Furthermore, they expect a multi-pronged approach to the study of entrepreneurship to resolve the key issues: “Who is the entrepreneur?”, “What is the key function of the entrepreneur in a market economy?”, and “What is entrepreneurship?”.

The notion being answers to the questions is that entrepreneurship is seen as a process in which the entrepreneur acts, and thus the answer to the question of who an entrepreneur is, will be the central question in this research.

Many academics have worked meticulously on the clarification of how and why an entrepreneur is defined. Hébert et al. (2006) and Hébert and Link (2009) found twelve identities of the entrepreneur in the historical economics literature that are outlined in Table 1. In this regard, one can see an identity as the content of what defines an entrepreneur. In a purely psychological context, identity has various specific literal

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meanings which are not included in this analysis and identity and definition are used interchangeably. Hébert et al. (2006) argue that only dynamic theories of entrepreneurship have any significant operational meaning despite the fact that throughout the ages, theories of entrepreneurship have been both static and dynamic. However, the entrepreneur's role in a static stage would merely constitute repetitions of past procedures and techniques already learned and implemented, which is unlikely. In fact, in a static world, there are neither changes nor uncertainty. Hence, the entrepreneur only becomes a robust figure in a dynamic world (Hébert et al., 2006, p. 261). Accordingly, the static roles could be implied in item 2 (supplier of financial capital), item 6 (a manager or superintendent), item 8 (the owner of an enterprise), or item 9 (an employer of factors of production). In contrast, the dynamic environment is implied in each of the remaining identities, who obviously define entrepreneurs in both static and dynamic terms in the definitions.

| Entrepreneurial identities according to Hébert et al. (2006, p. 261) | | |
|--|---|--|
| 1 | The entrepreneur is the person who assumes the risk associated with uncertainty | e.g., Smith, Turgot, Böhm-Bawerk, Edgeworth, Pigou, and Mises |
| 2 | The entrepreneur is the person who supplies financial capital | e.g., Smith, Turgot, Böhm-Bawerk, Edgeworth, Pigou, and Mises |
| 3 | The entrepreneur is an innovator | e.g., Baudeau, Bentham, Thünen, Schmoller, Sombart, Weber, and Schumpeter |
| 4 | The entrepreneur is a decision-maker | e.g., Cantillon, Menger, Marshall, Wieser, Amasa Walker, Francis Walker, Keynes, Mises, Shackle, Cole, and Schultz |
| 5 | The entrepreneur is an industrial leader | e.g., Say, Saint-Simon, Amasa Walker, Francis Walker, Marshall, Wieser, Sombart, Weber, and Schumpeter |
| 6 | The entrepreneur is a manager or superintendent | e.g., Say, Mill, Marshall, and Menger |
| 7 | The entrepreneur is an organiser and coordinator of economic resources | e.g., Say, Walras, Wieser, Schmoller, Sombart, Weber, Clark, Davenport, Schumpeter, and Coase |
| 8 | The entrepreneur is the owner of an enterprise | e.g., Quesnay, Wieser, Pigou, and Hawley |
| 9 | The entrepreneur is an employer of factors of production | e.g., Amasa Walker, Francis Walker, Wieser, and Keynes |
| 10 | The entrepreneur is a contractor | e.g., Bentham |
| 11 | The entrepreneur is an arbitrageur | e.g., Cantillon, Walras, and Kirzner |
| 12 | The entrepreneur is an allocator of resources among alternative uses | e.g., Cantillon, Kirzner, and Schultz |

TABLE 1 ENTREPRENEURIAL IDENTITIES (HÉBERT ET AL., 2006)

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Consequently, items 1, 3, 4, 5, 7, 10, 11 and 12 are fully in play due to the dynamic delimitation of a sustainable definition of an entrepreneur. Hence, a dynamic entrepreneur is according to Hébert et al. an active person in diverse versions who deals with uncertainty and undertakes responsibility and leadership.

In line with this, the economist and psychodynamics-trained Manfred Kets de Vries sees the entrepreneur as fulfilling a number of functions, inspired by Fritz Redlich, who in 1949 stated that the term “entrepreneur” derives from the French word “entreprendre”, which means to undertake. Hence, an entrepreneur takes action in the entrepreneurial process summarized as innovation, management-coordinating and risk-taking functions (Kets De Vries, 1977, p. 37) and refers also to entrepreneurship student’s understanding of an entrepreneur as an individual being instrumental in the conception of the idea of an enterprise and in the implementation of these ideas. In common Danish, the word entrepreneur² is interpreted as a contractor, which also is someone in charge of taking action, for example with construction equipment. According to Kets de Vries, management and innovation is crucial in a definition of an entrepreneur.

Landström (2010) outlines the insufficiency of a single clear definition and refers to 77 different definitions identified by Morris (1998) and 90 different entrepreneurial attributes by Gartner (1990) stating that the definition of an entrepreneur is not explicit (Gartner, 1985). Landström avoids defining the entrepreneur but mentions that in 1971 Kilby observed that the entrepreneur has many similarities to Milne’s “Heffalump” from Winnie the Pooh. Landström argues that “without clear definitions of central concepts, each researcher would make his/her own interpretation of the concept, which may limit the knowledge accumulation within the field” (2010, p.10).

Hébert and Link³ propose a synthetic definition of an entrepreneur based on their study of the history of economic thoughts about entrepreneurship since “The entrepreneur is someone who specializes in taking responsibility for and making judgemental decisions that affect the location, form, and the use of goods, resources, or institutions” (Hébert & Link, 1988; Hébert & Link, 1989, p. 47). This definition emphasises a conscious choice by a presumably adult individual “who specializes”, which speaks in favour of entrepreneurial skills being learned. If the definition was meant to advocate for innate skills, uncertainty towards the nature or nurture discussion, or openness with room for both conceptions, then a more appropriate definition would be: “an entrepreneur who is specialised in taking responsibility”.

Later, Carree and Thurik (2003) reflected on the definition inspired by Hébert and Link (1989), Bull and Willard (1993) and Lumpkin and Dess (1996). Thereby they consider the concept of entrepreneurship as inseparable from the individual entrepreneur:

² In Danish spelt: *entreprenør*

³ Hébert and Link published their first monograph, “The Entrepreneur: Mainstream Views and Radical Critiques”, in 1982 and reissued a second edition in 1988.

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“Entrepreneurship is the manifest ability and willingness of individuals, on their own, in teams, within and outside existing organizations to perceive and create new economic opportunities (new products, new production methods, new organizational schemes and new product-market combinations), and to introduce their ideas in the market, in the face of uncertainty and other obstacles, by making decisions on location, form and the use of resources and institutions” (Carree & Thurik, 2003, p. 437).

Undoubtedly, there has been a diffusion around the definition of an entrepreneur. Scholars might agree what an entrepreneur is not, but there is still a lack of answers on who, what, why and how an entrepreneur is. From the above-mentioned examples, the entrepreneur possesses learned dynamic behaviour to be in different constellations with others and to accomplish innovative changes, management, responsibility, decisions, perceiving and creating opportunities, and introducing ideas on the market while facing obstacles. Further, the entrepreneur is seen as a role and not as a profession, a fixed state or a lasting condition. Gartner asserts the behavioural characteristic of an individual: “The entrepreneur is not a fixed state of existence; rather entrepreneurship is a role that individuals undertake to create organizations” (1988, p. 64). Of course, these descriptions of an entrepreneur are encumbered with contradictions. Several of the contradictions relate to the fact that human beings develop during a lifetime, which is well described in psychological development theories (e.g., Bowlby, 1988a).

If not a widely held view, then there is mostly an agreement on entrepreneurship being an overall concept in which an entrepreneur exists and acts. Likewise, scholars agree that entrepreneurship is neither a profession nor a well-defined occupational class of individuals, but might only be exhibited during a certain phase of a lifespan or concerns a certain part of the individual’s activities (Carree and Thurik, 2003).

To complete the circle, Schumpeter (1934) states that “Because being an entrepreneur is not a profession and as a rule not a lasting condition, entrepreneurs do not form a social class in the technical sense as, for example, landowners or capitalists or workmen do” (p. 78). One cannot be born as a carpenter or a professional violinist, but one can be born with advantageous skills and affinity for working with wood or music supplemented with accomplished teachers and role models in the upbringing. From time to time, an excellent carpenter and violinist arise, and likewise an entrepreneur. Instead of emphasising specific behavioural elements (e.g., management) or specific cognitive abilities (e.g., perceiving opportunities), the investigation of patterns display of what the entrepreneur constitutes; which part is innate and which is learned; how to develop these characteristics; and which prerequisites induce a development?

Consequently, the definition of an entrepreneur will be pursued in section 3.1.2.

2.2.2 TYPES OF ENTREPRENEURS

Carree and Thurik (2003) found three types of entrepreneurs defined by Schumpeter, Kirzner and Knight: The Schumpeterian entrepreneur is the innovator who creates

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new combinations, called enterprises (Schumpeter, 1934); The Kirznerian (neo-Austrian) entrepreneur perceives profit-opportunities (Kirzner, 1997), where the Knightian entrepreneur assumes that risk is associated with uncertainty.

Almost concurrently, Hébert et al. (2006) identified the taxonomy of entrepreneurial theories on the basis of a historical review. They structured and then simplified the taxonomy into three major intellectual economic traditions, each spawned by Richard Cantillon (1755): the Chicago Tradition (Knight–Schultz), the German Tradition (von Thünen–Schumpeter), and the Austrian (Mises–Kirzner–Shackle) (Hébert et al., 2006).

Thus, three different types of entrepreneurs are described above or an entrepreneurial act interpreted in terms of the three types of entrepreneurs is described beginning with the individual innovator, who perceives a profit opportunity and recognises the risk of failure. The notion is that an operational fusion of the three traditions (Carree & Thurik, 2003; Hébert et al., 2006) describes an individual entrepreneur well, however, the differences might show substantial information for further investigation.

On the other hand, Miles et al. developed a theoretical framework based on behaviour. They called the four empirically determined means of moving through the organisational adaptive processes, called the adaptive cycle process for a strategic typology: the Defender, the Prospector, the Analyser, and an irrelevant fourth, the Reactor. Furthermore, they relate their theoretical framework to available theories of management, the Traditional Model, Human Relations Model, and Human Resources Model, to describe the patterns of behaviour used by organisation managers in adjusting to environments (Miles, Snow, Meyer, & Coleman, 1978). In addition, the important social factors are primarily affected by people's behaviour (Mischel, 1990).

In the same vein, Miner tested an entrepreneurship typology in 2000 with a reduced number of characteristics contained in each type (Miner, 1997). The four-way typology includes the Personal Achiever, the Real Manager, the Expert Idea Generator and the Empathic Super-Salesperson as outlined in Table 2.

Furthermore, Miner claims that the typology predicts not only entrepreneurial success but the more basic process of actually founding a firm in the beginning. The personal achiever type is defined by 7 characteristics close to the classic pattern set by McClelland and others (e.g. McClelland, 1997; McClelland et al., 1998). The real manager type is derived from theory indicating a strong managerial identification towards 7 characteristics. The omitted remaining managerial characteristics were high supervisory ability, strong self-assurance, strong need for occupational achievement, strong need for self-actualization, weak need for job security, and strong personal decisiveness. The expert idea generator type, also called “inventors”, is designated by four characteristics. The empathic super-salesperson type derives entirely from Miner's previous research on the typology, and only two characteristics remain of the original five (Miner, 2000). Hence, the 7 characteristics of the personal achiever type is particular interesting to pursue further.

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| Entrepreneurship typology according to Miner (2000) | |
|---|--|
| The personal achiever type | Motivation for self-achievement, Type A personality, Desire for feedback on achievements, Desire to plan and set goals for future achievements, Strong personal commitment to their ventures, Desire to obtain information and learn, and Internal locus of control. |
| The real manager type | Positive attitudes toward authority, Desire to compete with others, Desire to assert oneself, Desire to exercise power, Directive in cognitive style, Desire to stand out from the crowd, and Desire to perform managerial tasks. |
| The expert idea generator type | Desire to personally innovate, Conceptual in cognitive style, High intelligence, and Desire to avoid taking risks. |
| The empathic super-salesperson type | Empathic in cognitive style and Desire to help others |

TABLE 2 MINER'S ENTREPRENEURSHIP TYPOLOGY (MINER, 2000)

In relation to behaviour and profession, Hisrich et al. (2007) include entrepreneurs from all professions: architecture, business, education, engineering, law, medicine, and psychology. Furthermore, the process of creating something valuable new requires: first, devoting the necessary time and effort; second, assuming the accompanying financial, psychic, and social risks; and third, receiving the resulting rewards (Hisrich et al., 2005, p. 8).

In a comprehensive literature review, Hisrich et al. (2007) outlines the basis of entrepreneurial types. In general, the behaviourally based typology is meaningful and usable, since an entrepreneur's behaviour is visible and can be recognized and organised in clusters. The work of Hisrich et al. (2007) suggest that entrepreneurs form three groups: craftsmen, who are actually supposed to be allocated as entrepreneurs; creative, innovative, diligent people without interest in growth and business, but perhaps in benefits; and the diverse entrepreneurial types divided into potential, ordinary and team entrepreneurs. The empirically based entrepreneurial types, except those from Singh and DeNoble's (2003) theoretically grounded typology, are shown in Table 3.

The entrepreneurial types outlined on the basis of Miners (2000) typology (Table 2) and the amended typology from Hisrich et al. (2007) (Table 3) are supported theoretically (Eckhardt & Shane, 2003; Hisrich et al., 2007; Shook et al., 2003), where innovation (creating a new firm, organisation, product or process) differs from imitation (replicating an existing market) (Ruef et al., 2003). The team entrepreneur plays a significant role in new product innovation and in industries requiring a diversity of expertise (Chowdhury, 2005), and refers to a group of owners and

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managers of the same firm, most commonly family firms (Ensley et al., 2000; Ucbasaran et al., 2003).

| Entrepreneur types, amended from Hisrich et al. (2007) | | | |
|---|---|--|---|
| Craftsman: | Administrative (Cooper et al., 1997), Opportunistic, Inventor (Miner et al., 1992), and Opportunistic (Smith, 1967; Smith & Miner, 1983) | | |
| Creative selfish types: | Creative acquirer, Controlled perseverator, Distant achiever, Rational manager, Egocentric agitator (Muller & Gappisch, 2005), and Personal achiever, Emphatic super-salesperson, Real manager, Expert idea generator (Miner, 1997; 2000) | | |
| Typologies of entrepreneurs with interest in innovation and business: | Potential: | Ready, Ready reluctant, Ready unfeasible, Ready unconvinced, Daydreamer, Undesirable, Uncredible, Bureaucrat (Erikson, 2001) | |
| | Ordinary: | Nascent: | Nascent entrepreneurs against-their will, Would-be nascent entrepreneurs, Net-working nascent entrepreneurs with risk-avoidance patterns (Korunka et al., 2003) |
| | | Based on work expectation: | Craftsmanship, Security, Risk/Challenge, Managerial (Lafuente & Salas, 1989) |
| | | Female: | Need achiever, Pragmatic, Managerial (Langan-Fox & Roth, 1995) |
| | | Retiree: | Constrained, Rational, Reluctant (Singh & DeNoble, 2003) |
| | | Fatherless (male): | Entrepreneurs who become their own fathers (successful), Self-destroyers (unsuccessful), Grandiose dreamers (unsuccessful) (Strenger & Burak, 2005) |
| | | Team: | Corporate entrepreneur or intrapreneur and the team entrepreneur (Hisrich et al., 2007) with a diversity of expertise (Chowdhury, 2005) Group of owners and managers (Ensley et al., 2000) Family firms (Ucbasaran et al., 2003). |

TABLE 3 ENTREPRENEURIAL TYPOLOGY AMENDED FROM HISRICH ET AL. (2007)

Hence, Hébert et al.'s (2006) arguments that only dynamic theories have significant operational meaning is meaningful, because the entrepreneur enters into a dynamic process whenever acting entrepreneurially. Hereby, Schumpeter's (1952) notion is reflected of the entrepreneur being an innovator encompasses an individual who innovates throughout life and creatively destroys balances. Additionally, Hisrich et al. value the multiphase process consisting of intentional opportunity search, discovery/recognition, evaluation, and exploitation (Eckhardt & Shane, 2003; Shook et al., 2003).

However, Wennekers and Thurik (1999) differentiate between types of entrepreneurs as either entrepreneurial or managerial and either self-employed or employees,

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distributed in a matrix (see Table 4). However, only three of them are entrepreneurial or self-employed and the last group, Executive managers, are without entrepreneurial characteristics. Furthermore, the paradox that an entrepreneur is not considered being an employee (Casson, 2010) is not resolved in this matrix. Thus, Wennekers and Thurik emphasises the Schumpeterian entrepreneur, which according to the above mentioned descriptions is first and foremost innovative and secondly a business owner as entrepreneurial types.

| Matrix with types of entrepreneurs by Wennekers and Thurik (1999) | | |
|---|-----------------------------|----------------------------|
| | Entrepreneurial | Managerial |
| Self-employed | Schumpeterian entrepreneurs | Managerial business owners |
| Employees | Intrapreneurs | Executive managers |

TABLE 4 TYPES OF ENTREPRENEURS (WENNEKERS & THURIK, 1999)

In continuation, Kirchoff (1994) calls the managerial business owners “the economic core” and Carree and Thurik (2003) see them as the seedbed for entrepreneurial ventures. Thereby, scholars unify innovative entrepreneurs and steady routinized businessmen without distinguishing between personal characteristics and macro-, meso- and micro-level interferences.

Hence, the concept of the entrepreneurial personality becomes crucial in interpretation of intentions, in research objectives, and for societal development reasons. “In other words, entrepreneurship research cannot develop a consistent theory about entrepreneurship if it does not take personality variables into account as well” (Rauch & Frese, 2007b, p. 375). Consequently, the personality of an entrepreneur needs further investigation.

2.3 THE ENTREPRENEUR PERSONALITY AT FIRST GLANCE

For many years, I have been wondering if the entrepreneurial personality is born or made. The arguments for both sides are numerous, but my instinct tells me that it is more complicated. The knowledge from working with clients’ motives, desires, failures, repressions and excuses have convinced me that there must be an innate seed which is impressionable during life.

An example of outlining the entrepreneurial personality (Kets De Vries, 1977; Kets De Vries, 1996a; Zaleznik & Kets De Vries, 1976) mentions six main psychological themes: a need for control, a sense of distrust, a desire for applause, a tendency to ‘split’, scapegoating, and the flight into action (Kets De Vries, 2009). However, Kets De Vries mixes the concepts of for instance personality and motivation, rendering measurement impossible.

Hisrich et al. (2007), on the other hand, provide research questions as opportunities for psychological research organised around five key topics: The personality

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characteristics of entrepreneurs, Psychopathology or exploring the dark side of entrepreneurs, Entrepreneurial cognition, Entrepreneurship education, and Expanding entrepreneurship as a global phenomenon. Based on the personality characteristics of entrepreneurs, the research questions are written as follows: Are the personality characteristics of entrepreneurs a predisposing factor, or are they learned from the role itself? That is, what are the antecedent personality characteristics for entrepreneurship? What is the relative importance of different personality characteristics at each phase of the entrepreneurship process? Do the personality characteristics that predict start-up differ from those that predict growth and survival? Which personality characteristics need to remain stable, and which personality characteristics need to change or develop over time? Are personality characteristics a longitudinal predictor of success? Which personality characteristics are associated with failure? What are the moderating and mediating variables in the personality–entrepreneurship relationship? Do the important personality characteristics differ for individual versus corporate or team-based entrepreneurs? (Hisrich et al., 2007, p. 575)

The content of these research questions revolves around the value of personality characteristics, specific details (for example, failures), the durability, and the ability to orchestrate one’s own destiny. Thus, researchers are sent back to square one regardless of the importance of the points due to the diversity and thereby a lack of possible measurement of the topics and a lack of even cluster into meaningful themes. The notion is to focus on the first key topic of personality characteristics of entrepreneurs.

2.3.1 ATTEMPTS TO THEORETICAL IDENTIFY THE PERSONALITY TRAITS

The major challenge in understanding the individual entrepreneur is the subject of personality traits and the related psychological mechanisms. First, there is the born *or* made discussion, which is viewed as an issue about born *and* made. It is suggested that this nature versus nurture topic should be understood as several factors of innate abilities and likewise of learned skills that characterise the individual in a unique configuration. Second, personality traits are used as an overly-simplistic explanation to identify a group of people without considering the value or strength of these traits and without considering the synergized output of a collection of traits in which a specific trait participates. Third, the measurement of personality traits is problematic and will be further discussed. In general, scholars are of a different opinion regarding the traits by which one can identify an entrepreneur. Regardless, an attempt towards identifying the basic of the entrepreneurial personality is outlined below.

In the literature, the entrepreneurial personality is frequently identified by only one or few personality traits, such as Risk Willingness or Tolerance for Ambiguity (Low & MacMillan, 1988; Schéré, 1982; Sexton & Bowman, 1985). Schéré⁴ also found that the two motivation factors Need for Achievement and Need for Autonomy were the

⁴ Jean Loup Schéré investigated a data sample of 52 entrepreneurs and 49 managers using the Budner scale (1961) for his PhD dissertation in 1981. The PhD thesis was his only research study and was published afterwards in different versions.

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best predictors for allocating individuals to either the entrepreneurial or the managerial group (1982).

However, Risk Willingness is a significant personality trait not only for entrepreneurs but also for a leader who makes decisions on an incomplete basis daily. "It is perhaps more insightful to view entrepreneurs as capable risk managers whose abilities defuse what others might view as high risk situations" (Low & MacMillan, 1988, p. 147).

Similar to the myth of the earth being flat, it is common sense for an entrepreneur and everyone around the entrepreneur that it is impossible to identify an individual with only a single item. Specifying is complicated and requires interpretation and comprehension of various sorts of information. Therefore, a description of an entrepreneur using only one or few personality traits is at best misleading even if it has been well processed by statistical analysis (Hornaday & Aboud, 1971; Low & MacMillan, 1988; McClelland, 1987; Sexton & Bowman, 1985): "On the contrary, we are dealing with an individual often inconsistent and confused about his motives, desires and wishes, a person under a lot of stress who often upsets us by his seemingly 'irrational', impulsive activities." (Kets De Vries, 1977, p. 36)

In fact, the overall literature on the characteristics of an entrepreneur is theoretical work lacking empirical study (Gregoire et al., 2006). On the other hand, past research has tended to focus on the start-up phase when comparing characteristics of entrepreneurs and non-entrepreneurs due to the assumption that either innate or stable characteristics cause the dependent variable of entrepreneurial status (Davidsson, 2007). From the overall question as to whether entrepreneurship is born or made, the two main research approaches on personality and entrepreneurship are summarised in the broad research questions: Why do some people but not others become entrepreneurs? and Why do some people become more successful entrepreneurs than others? (Shaver, 2007). In both cases, researchers need to dig into the basis of this differentiation, if any, and thereby into the entrepreneurial personality.

The research of personality characteristics peaked in the 1980s, although the impetus for substantial research began in the 1960s and 1970s with research on the personality trait Need for achievement (McClelland, 1967). Among the most common descriptions of entrepreneurs is Schumpeter's 'creative destructor' from 1931 and David McClelland's findings from 1961 and 1975 on the entrepreneurial personality. Hence, the entrepreneurial personality consists of high achievement motivation and a need for autonomy, power, and independence (McClelland, 1987) and the entrepreneurs are described as moderate risk-takers, anxious, inner-directed and have an internal locus of control (Kets De Vries, 2009; Miller, Kets De Vries, & Toulouse, 1982).

Unfortunately, these descriptions are not immediately comparable, because the levels differ, as when Schumpeter's definition includes the entire entrepreneur and McClelland in one unit includes the entrepreneur's motivation, behaviour and personality traits. Except for a few examples, most descriptions of entrepreneurs are dependent on the moment and on social and environmental circumstances.

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Thus, Hisrich et al. (2007) state that the role of entrepreneur's personality has been underestimated in past research because of design and methodological limitations, and these may explain the current disagreement in the literature about personality being a useful construct in entrepreneur research. Moreover, many of the research results are weak, for instance, how personality characteristics fail to reliably distinguish between entrepreneurs and non-entrepreneurs (for example managers) and generally account for only a small proportion of the variance in entrepreneurial success (Cromie, 2000; Hisrich, 2000).

Additionally, Rauch & Frese found a disappointingly weak association of risk-taking propensity and outcome variables, but also a strong connection between self-efficacy and success together with a meta-analytic review that reveals only a small, positive relationship between autonomy, internal locus of control, and risk-taking propensity and new venture creation and success, followed by a moderate, positive relationship between innovativeness, need for achievement, and self-efficacy and new venture creation and success (2007a).

Hence, Hisrich, Langan-Fox and Grant put forth a call to action psychologists aiming to fill in the gaps in the entrepreneur-centred literature, developing the theory and undertaking empirical research. They state that psychologists help in identifying the factors that influence new venture creation and success and enhances the construction of public policy to facilitate entrepreneurial activity (2007, p. 575).

To exemplify the challenges of identifying the entrepreneur, Thompson (2004) found six key entrepreneur character themes or natural and instinctive behaviours, and together with Bolton (2003) they suggest a new framework for identifying entrepreneurs based on the six character themes: Focus, Advantage, Creativity, Ego (inner and outer), Team and Social (FACETS) with each possessing at least three sub-characteristics. The six themes are interdependent and listed in order of significance; the ranking is Creativity, Advantage, Focus, Team, Ego and Social (CAFTES). Regardless of the low ranking of team, the context of an entrepreneur's team consists of four elements: 1) finding and selecting the right people, 2) building these people into an effective entrepreneurial team, 3) knowing when and where help is required and who to turn to, and 4) networking (Thompson, 2004).

Some of the behavioural characteristics are visible and "unsuppressible", others natural and not quite as instinctive, and the remainder can be achieved with some effort. The behavioural characteristics are either classified as talent, temperament or strengthened by appropriate techniques. However, the characteristics overlap too much to measure individually, and as a result the focus is on the entire proposal intertwined. Hence, the pressure on finding a measurable valid and reliable personality framing is indispensable and will be further pursued.

2.4 THE CONCEPT OF PERSONALITY

In general, the interest around personality reflects a common interest in the connection between body and mind, personal development and the causes of diseases and well-being. Over time, the interpretation of personality has gone through some

modifications. However, there seems to be a tacit agreement regarding the connection between a human being's body (anatomy and physiology) and its mind (thoughts, cognition, perception, etc.). The dispute is on how and how much and it seems that the contemporary favourites and habits determine the interpretation, impact and treatment in relation to the actual debate of personality patterns. As such, the focus is on the pattern itself and the agreement that the mind has a sort of a pattern that differs between some people and is very alike between others.

Hence, this section explains the current perception of the concept of personality through a historical lens and presents an updated definition of the concept of personality. Moreover, the large amount of attempts to describe an intangible concept gave rise to the development of a model that emphasises both the psychological variables and the psychological invariables in section 3.2.2.

2.4.1 THE HISTORICAL INTERPRETATION OF THE CONCEPT OF PERSONALITY

The development of the concept of personality reveals important factors in relation to our current interpretation of the concept of personality. For instance, part of the confusion around the concept of personality relates to different historical research paths. Hence, the most influential theoretical contributors are presented along with a short biographical description to explain the context in which the personality concept was developed and should be understood, which at the same time explains why the current concept needs to be further developed.

In ancient Greece, the physician Hippocrates (ca. 460 BC – ca. 370 BC) strived to understand human beings. Today, he is famous as the father of medicine, but in ancient Greece his ideas were in opposition to the established opinion. During a twenty-year prison sentence, he established some of his most important medical research, and for the rest of his life, he taught a mix between philosophy and medicine. His aim was to separate the discipline of medicine from religion and to teach that diseases were not a punishment from the gods but were caused naturally. Hippocrates introduced a new understanding of the body's reactions by his studies in anatomy and physiology with observation and documentation. Moreover, he introduced two pillars of personality, humours and crisis, as causes for both the illness and the wellbeing of the individual. Thereby, as well as founding the discipline of medicine, Hippocrates launched the concept of personality and described most of the aspects in 400 BC that are connected to the concept of personality of today.

Hippocrates' humours are often displayed in a figure with four coloured squares described as: the red Sanguine (pleasure-seeking and sociable), the yellow Choleric (ambitious and leader-like), the black Melancholic (introverted and thoughtful), and the blue Phlegmatic (relaxed and quiet), and each of them is related to the four body fluids according to Hippocrates. The typology, the elements, the temperature and the humidity were mapped in a matrix by Galen (Aelius Galenus, AD 131- ca. 200) as the most important contribution to the theory of Hippocrates. Hippocrates used his knowledge of four different types of human beings in more successful differentiation of his gentle treatments, which used materials such as cold or hot water. Hippocrates'

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findings and Galen's typology left some remarkable traces throughout the history of personality and personality traits still impacting.

In the West, the concept of personality has been heavily influenced by two persons, who were friends for a short period but soon became competitors: the Austrian Sigmund Freud (May 6, 1856 –September 23, 1939) and the Swiss Carl Gustav Jung (July 26, 1895 –June 6, 1961).

Through Freud's neurological research, he developed theories about psychotherapy (Freud, 1964). Freud's method was primarily dialogues supplemented with hypnosis to relieve the unconscious mind (Freud, 1913). The major contribution to personality theory is Freud's model of the human psyche divided into three parts: id, ego and superego. The id describes the unconscious, impulsive and childish part of the psyche. The ego describes the rational part that continuously attempts to achieve a balance between the id and the superego. The superego is the moral part connected to the upbringing and the environmental moral codex (Freud, 1961). Freud's idea was that there is a close correspondence between a mental disturbance and the person's experience of being overburdened or threatened, which is why a person develops defence mechanisms like denial, repression and displacement. Freud was followed by his daughter Anna and for instance Erik Eriksson, who outlined the influence of upbringing by his phases of personality development (Erikson, 1964; Erikson & Erikson, 1998).

Jung worked with many different aspects of the conscious and the unconscious mind in developing the concept of the collective unconscious and the archetypes (1961), and he interpreted about 80,000 dreams from his clients (Jung, 1923; Jung & Hull, 1954). Jung's theories and methods were adapted by his followers, for instance Katharin Cook Briggs (1875 – 1968) and Isabel Briggs Myers (1897 – 1980), who inspired by Jung, developed the Myers Briggs Type Indicator (MBTI) displayed very similar to the humours of Hippocrates.

However, the perception of personality in the West is rather new compared to other parts of the world. In the East, the Middle East and the indigenous Americas and Africa, there are different perceptions with older roots.

In Asia, the man as an individual has been of less value than the family tree. For that reason, the personality concept is not used in connection to self-actualizing (Maslow, 1943) but in maintaining good health. For at least 5,000 years, a holistic approach has explained people's health, development, functionality, socializing ability and performance in a specific pattern with five significant elements, which is displayed by five intertwined circles in a consolidated pattern. For each of the five elements: Fire, Earth, Metal, Water and Wood, there is a solid connection to feelings, organs, and superficial marks on the body. The objective is maintaining a harmonic balance.

In other parts of the world, the personality concepts vary but are mostly comparable to the Asian holistic comprehension with focus on the family tree or ancient gods. The artefacts that can provide a historic comprehension of personality are sparse, nonetheless from history we can surmise some generalizations. From the Danish rune

stones, we know that the first and the second King of Denmark in the year about 910 – 985 were proud people who wanted to be remembered for their achievements. From Egypt, it has been possible to understand a part of the Pharaoh's lives from the hieroglyphs in the pyramids. Thereby, we discover that the ideal personality in Egypt was brave, robust, competent in many fields and also handsome and wise. Similar conceptions are found in the Incas and other indigenous populations.

The significance of an individual's personality seems to have increased by time and especially in the West and North America. But since it has, the need of insight has increased as well such as the parts included in the personality.

2.4.2 THE IMPORTANCE OF INCLUDING THE UNCONSCIOUS PART OF THE PERSONALITY

The two American psychologists Joseph Luft (1916-2014) and Harrington (Harry) Ingham (1914-1995) pointed out that a quarter of our knowledge of ourselves is hidden when they introduced their matrix of insight and self-awareness, called the JoHari window (Luft & Ingham, 1955). They used a technique that involves self-selection of five or six adjectives from a pool of 58 adjectives developed and selected to describe one's own personality, and afterwards a peer of the subject also selects five or six adjectives, which all are distributed on a grid (Luft, 1969, p. 177). Thus, one square in the matrix, the arena, is the available public self, which is in play according to personality instruments using self-report measurement. However, the self-report prompts reliability problems related to the fact that a current self-picture changes over time, and validity problems because self-report scores generally are higher than objective scores. Luft and Ingham found that two squares are hidden to others and two are hidden to oneself, thereby one square is totally unknown adequate to the unconscious part of the personality.

Clearly, researchers can learn from the inkblot test of the Swiss psychiatrist Herman Rorschach (1884-1922) and develop association tests revealing the unconsciousness. The score system is however complicated and requires years of authorized rehearsal. On the other hand, unconscious answers can be collected by implicating more than 10 well-developed items for each trait in the personality test measurement considering youth as well as current preferences, opinions disconnected from temperature, feelings and the like. Furthermore, a full picture of the personality of any individual automatically includes the unconscious part when the personality is measured with valid and reliable test instruments.

2.5 MEASURING THE PERSONALITY CONCEPT IN A HISTORICAL VIEW

In the last decades' use of personality tests in assessment for search and selection speaks in favour of a changed purpose from the ancient Greek's holistic re-establishing balance for the individual's own sake. Hence, our current interpretations of the personality and of an entrepreneurial personality are interlinked with our perception of the measurement tool.

The first personality test instruments were launched and developed simultaneously with intelligence tests during World War I due to investigation of the brain

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functionality of wounded soldiers. The perception at the time was that massive quantitative data lead to recognising a personality pattern, such as injuries in the frontal lobe inducing disorganisation. The chart of the brain mechanism becomes crucial when related to the individual's ability to perform in accordance with their personality, and especially Luria and Wechsler have made a massive effort in this area.

The Russian physician Alexander Romanovich Luria (1902–1977) cooperated with Freud and Vygotsky⁵, and they developed measurements for unconscious feelings and conceptions. Moreover, Luria argues that neuropsychology must include profound insight into the individual's whole existence (Leontiev & Luria, 1999; Luria & Gantt, 1932; Luria, Simernitskaya, & Tubylevich, 1970; Luria, 1971).

While screening new draftees for the United States Army during World War I, the American psychologist David Wechsler (1896 – 1981) developed psychological tests and a standardised intelligence test for adults and children: the Wechsler Adult Intelligence Scale (WAIS), the Wechsler Intelligence Scale for Children (WISC), and the Wechsler Preschool and Primary Scale of Intelligence (WPPSI), which are commonly used by psychologists to assess intelligence⁶ (Wechsler, 1925; Wechsler, 1935; Wechsler, 1975). Wechsler's tests are based on his paradigm that intelligence is “the global capacity to act purposefully, to think rationally and to deal effectively with environment” (Kaplan & Saccuzzo, 2005, p. 256). A contemporary perspective on intelligence testing includes the American developmental psychologist Howard Earl Gardner's theory of multiple intelligences that to some extent clarifies the many facets of personality related to intelligence (Gardner, Kornhaber, & Wake, 1996).

Historically, the most frequently used personality tests are the Minnesota Multiphasic Personality Inventory (MMPI) by Starke R. Hathaway and J.C. McKinley from 1939, the California Psychological Inventory (CPI) by Harrison Gough from 1956, the 16 Personality Factors (16 PF) by Raymond Cattell from 1946 and the Revised Neuroticism-Extroversion-Openness Personality Inventory (NEO-PI-R) by Paul T. Costa and Robert R. McCrae. The first version of the NEO-PI-R was published in 1978, and the revised version is a 240-item measure of the five basic personality traits. The shorter and most commonly used assessment of the five personality traits has 60 items and is called The Big Five.

For vocational purposes, a significant personality test is the Myers-Briggs Type Indicator (MBTI) developed in 1962 from Jung's theory by Katherine Cook Briggs and her daughter Isabel Briggs Myers. In Scandinavia, Jung's Type Indicator (JTI) is preferred due to its adaptation to the Scandinavian culture. Previously, John L.

⁵ Lev Vygotsky (1896 – 1934), Russian psychologist, well-known for his concept of zone of proximal development.

⁶ Flynn, J. R. (1987). Massive IQ gains in 14 nations: What IQ tests really measure. *Psychological Bulletin*, 101,171-191.

Holland’s Hexagon model was commonly used for vocational choices (Holland, 1966; 1997).

2.5.1 EXAMPLE OF PERSONALITY PERCEPTION DUE TO PERSONALITY TEST DEVELOPMENTS

In terms of key aspects of personality knowledge and the development of personality tests, two persons have been highly influential: Carl Rogers (1902-1987) and Hans J. Eysenck (1916-1997).

Carl Ransom Rogers developed a new professional approach to reach the individual in counselling through his work with troubled children (Rogers, 1939). By means of Rogers’s post-Freudian inspired client-centred psychotherapy, clients were able to resolve difficulties and gain the necessary insight to restructure their life through personal changes. Rogers taught cross-cultural communications, personal growth, self-empowerment and learning for social change, and his influence on psychotherapy and the interpretation of the possibilities of personality development is comparable to the influence of Freud’s work.

In this context, Rogers’s insight into principles for personality development, not stages, establish a progression for and by the individual. An important key to developing self-concept is conditional and unconditional positive regard. Rogers discovered 19 propositions about individuals (1951) and seven characteristics of a fully functional person with an optimal development (see Table 5), which turn out to be comparable with the characteristics of an entrepreneur.

| The 7 characteristics of a fully functional person with an optimal development according to Carl Rogers (1961) | |
|--|--|
| 1 | Open to experience |
| 2 | Present in the moment and in the present process, whatever structure it appears to have |
| 3 | Trusting one’s own judgment, sense of right and wrong and able to choose appropriate behaviour for each moment |
| 4 | Able to make a wide range of choices, fluently and concurrent with the necessary responsibility |
| 5 | Creative – related to the feeling of freedom, for instance, shaping one’s own circumstances |
| 6 | Reliable and constructive in any action, while maintaining a balance between all of one’s needs. (Even aggressive needs will be matched and balanced by intrinsic goodness in congruent individuals) |
| 7 | Experiences joy and pain, love and heartbreak, fear and courage intensely, while having a rich, full and exciting life |

TABLE 5 CHARACTERISTICS OF A FULLY FUNCTIONAL PERSON (ROGERS, 1961)

Accordingly, “This process of the good life is not, I am convinced, a life for the faint-hearted. It involves the stretching and growing of becoming more and more of one’s potentialities. It involves the courage to be. It means launching oneself fully into the stream of life.” (Rogers, 1961)

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The next key person, the German-British psychologist Hans Jürgen Eysenck developed a distinct model and a theory of personality (and intelligence) from Hippocrates' four humours by means of studying 700 soldiers at a hospital. His model has undergone several changes through time. Eysenck based his work on factor-analytic summaries, and his starting point was the discovery that individual differences in behaviour could be described with reasonable accuracy in terms of two major dimensions of personality, for example, introversion versus extraversion (Eysenck & Eysenck, 1969).

In his work, anxiety is often used as a term (Eysenck, 1973). Anxiety is a relatively precise and simple term, whereas neuroticism, a psychiatric diagnosis⁷ frequently used since the 20th century, is a more complex and misleading description of a personality characteristic. The same is true of psychoticism, which Eysenck and his wife added in the 1970s as a third dimension (Eysenck & Eysenck, 1976). Often psychological typologies are related to psychotic syndromes with the aim of studying the pre-psychotic personality more closely (Bennet, 1951, p. 589). By comparison, psychologists and psychiatrists are able to discuss someone's behaviour or personality as "borderline", but it does not function in a discussion for a general audience.

A perennial problem in using personality test terms is the necessity of updating the adjectives for human behaviour over the years. For instance, a description such as Masculine may be understood differently across cultures and might be misinterpreted after the women's liberation movement. Conclusively, and in accordance with WHO, those using the concepts of neurosis and psychosis in academic research and measurement of personality need consider using the updated versions.

⁷ Due to Asian clinical culture's disconnection with the Freudian-European conceptualization, the concept of neuroticism has been dismissed from the ICD-9 and ICD-10 diagnoses lists created by WHO in May 1990 and that came into use in WHO Member States in 1994 (the release date for ICD-11 is 2017). Concurrently, neurotic anxiety was displaced with panic anxiety.

“Neurosis and psychosis: The traditional division between neurosis and psychosis that was evident in ICD-9 (although deliberately left without any attempt to define these concepts) has not been used in ICD-10. However, the term "neurotic" is still retained for occasional use and occurs, for instance, in the heading of a major group (or block) of disorders F40-F48, 'Neurotic, stress-related and somatoform disorders'. Except for depressive neurosis, most of the disorders regarded as neuroses by those who use the concept are to be found in this block, and the remainder are in the subsequent blocks. Instead of following the neurotic-psychotic dichotomy, the disorders are now arranged in groups according to major common themes or descriptive likenesses, which makes for increased convenience of use. For instance, cyclothymia (F34.0) is in the block F30-F39, Mood [affective] disorders, rather than in F60-F69, Disorders of adult personality and behaviour; similarly, all disorders associated with the use of psychoactive substances are grouped together in F10-F19, regardless of their severity. "Psychotic" has been retained as a convenient descriptive term, particularly in F23, Acute and transient psychotic disorders. Its use does not involve assumptions about psychodynamic mechanisms, but simply indicates the presence of hallucinations, delusions, or a limited number of severe abnormalities of behaviour, such as gross excitement and over activity, marked psychomotor retardation, and catatonic behaviour.”(WHO ICD-10, p. 10)

The above-mentioned scholars are essential in determining the common tacit knowledge of the personality, but many have helped develop personality measurement. Often, the comparative studies on personality inventories are very large and cause a self-perpetuating pattern. Generally, in my experience the personality test developed and used for occupational purposes appears to have a better focus and frame for the essence of the entrepreneur. However, the development of measurement instruments as personality tests must continue to capture the concurrent perception of the personality and reverse to develop a contemporary perception of the personality concept further.

2.6 EXTERNAL INFLUENCES ON THE PERSONALITY

As a human being, the entrepreneur exists in a society and experiences influences from external relationships in an impacting context, for instance the culture of the nation in which the individual is raised. Hence, the outcomes of the dynamic processes depend on a set of conditions such as the national (or regional) cultural environment and the internal culture of corporations (Audretsch, Thurik, Verheul and Wennekers, 2002), and the environment is expected to impact the outer personality attributes massively in regard to becoming an entrepreneur in the first place and secondly to succeed as an entrepreneur.

The notion is that some psychological factors form the entrepreneurial individual's personality attributes even though the personality traits are innately established. Consequently, the rate of becoming and succeeding as an entrepreneur is influenced by first and foremost imprint in the upbringing and afterwards by time marshalling, cultural patterns, tacit and achieved knowledge due to for instance educational access and the quantity and quality of support, which is further pursued.

In general, scholars agree that the family environment during the childhood of entrepreneurs has a significant impact on the development. Hornaday and Bunker argue that the most prudent line of action for extending research into the nature of the entrepreneur would be to pursue objective test evaluations selected from biographical items (Glennon, Albright, & Owens, 1966) of the entrepreneurial background, family, early experiences in childhood, and adolescence (Hornaday & Bunker, 1970). In 1971, they added that regardless of the general expectation, no specific hypothesis could be formed from survey interviews either regarding long work hours, work interfering with family relationships, regimentation (reflecting their family background), or rebellion against an attitude in the father which they perceived with distaste, or any other corresponding subjects (Hornaday & Aboud, 1971).

In contrast, Ray stresses the importance of the diversity of entrepreneurial behaviour due to the larger cultural environment that shapes the firm instead of a one-sided search for the prototype of entrepreneurial personality or the ideal personality attributes of the entrepreneur (1993).

In fact, launching and managing a new venture successfully requires both human and environmental resources (Baum et al., 2001), and it has been suggested that parental ownership of a business combined with a difficult childhood and frequent relocation

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(e.g., Drennan, Kennedy, & Renfrow, 2005) supports entrepreneurial intensions. In addition, privately owned firms strongly reflect a multitude of characteristics of their founders such as upbringing, education, social contacts, cultural heritage, and work experience; in other words, the expertise and personality of the “owner manager” (Gedajilovic & Zahra, 2005).

However, new knowledge on how this imprinting process influences the entrepreneur and the venture indicates first that entrepreneurs are imprinted and second that the outcome impacts decision making and guides entrepreneurs’ decisions as they progress through their entrepreneurial careers (Mathias, Williams, & Smith, 2015).

Moreover, Kirkwood found that an entrepreneur's upbringing appears to be the soil from which the decision to start a new venture emerges. Regardless, the decision to start a new venture is complicated and multi-faceted, yet both men and women described the positive influence of growing up in an entrepreneurial family as a key role in the decision to become entrepreneurs (Kirkwood, 2007; 2012; Kirkwood & Campbell-Hunt, 2007).

2.6.1 IMPRINT AND STAGES OF LIFE

A newborn is attached to the parents by imprinting, which is well known from animal studies, and the child is shaped by the upbringing and cultural norms which presumably affect the subject of the enterprise but not necessarily if the child becomes an entrepreneur or not.

A classical scholar, Konrad Lorenz, was one of the first ethologists to stress the importance of imprinting. For animals, the imprinting takes place only during a short interval, shortly after the birth, and it seems to be irreversible; once it has taken place it is difficult to undo the attachment. The evidence for a critical period in the development of social attachments in humans is weaker, probably because we develop at a slower pace.

Thus, the human critical period of imprinting might extend over a period of months or years (Lorenz, 1935, pp. 137-213 and pp. 289-413). In 1963, Lorenz adds puberty as an important period in relation to imprinting due to human beings’ indubitable tendency to loosen their allegiance to all traditional rites and social norms during and shortly after puberty.

Bowlby (1951) suggests that the period from six months to one year and in general up to the age of two and a half years is a critical period for good mothering to develop normal social and psychological development.

Likewise, Mussen, Conger and Kagan argue that the child’s first experience with food as satisfactory or not satisfactory impacts the ways that the individual seeks help in the future. The more satisfied as a newborn, the more predisposed the individual will be in future to address someone else to satisfy their needs in adulthood (1963, p. 158).

Mary Salter Ainsworth and John Bowlby developed attachment theory and conducted research to enhance the understanding of personality development in a partnership

that endured for 40 years. “In regards to socialization, their findings indicate that infants have a natural behavioural disposition to comply with the wishes of the principal attachment figure.” (1991, p. 7) In their second volume of their trilogy, they dealt with the essential link between secure attachment and the development of healthy self-reliance with roots in the Secure Base Concept and Pathways for the Growth of Personality based on epigenesis⁸. As such they emphasised an interaction between genetic and environmental influences in personality development (Ainsworth & Bowlby, 1991, p. 8; Bowlby, 1988a).

Kluckhohn, Murray and Schneider agreed and added that the concept of nature versus nurture can only rarely be divided, when surroundings impact the individual. Geneticists agree that attitudes are currently affected by a complicated interaction of biological inherent possibilities and environmental forces. The results of each interaction modify the personality, and therefore only two questions are relevant: 1) which of the different genetic possibilities is actualised as a consequence of specific life events in the given physical, social and cultural environment? and 2) which limitation is caused by the genetic constitution in relation to the development of this particular personality? (1953, p. 56)

Additionally, in the 1920s the Russian psychologist Lev S. Vygotsky developed the concept of Zone of Proximal Development. The theory underlying the zone of proximal development suggests that every development uses the present as one’s starting point and develops incrementally from there (Chaiklin, 2003; Leontiev & Luria, 1999; Tudge, 1992; Vygotsky, 1980; 2012; Vygotsky, Luria, & Knox, 2013; Vygotsky, 1997). As an example, language development starts with a few nouns, then more nouns, and then continuing with verbs and sentences.

In line, Erik Homburger Erikson developed an epigenetic diagram (see Table 6) that reflect eight inevitable stages every person develops through. According to Erikson, the individual’s constitution and lifestyle in the subsequent years and stages depend on a successful outcome in each stage. The persons who does not achieve a successful outcome from a previous stage must return and “live through the activity” at a later period in life (Erikson, 1964; 1968a; Erikson & Erikson, 1998; Erikson, 1994; Erikson, 1956; 1968b; 1980).

The earlier stages in relation to personal development of entrepreneurs seem most important. The optimism developed from 0-1 year is the foundation for the curiosity that leads to experiences and opportunity recognitions through will (1-3 years) and ability of initiative and exploration (3-6 years) in the first place, followed by endless refinement and industry (6-12 years) as a productive and creative entrepreneur (26-64 years).

⁸ In that sense a stepwise development of human personality through the individual’s solution of psycho-social crises.

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| Erik H. Erikson's Epigenetic Diagram adapted as 8 psychosocial stages for the individual's successful development | | | | | |
|---|---|--|---|---|------------------------|
| Age | Crisis | Primary activity | Successful outcome | Unsuccessful outcome | Resolution or "Virtue" |
| 65-death Old age | Integrity vs. Despair | Life review and evaluation | Sense of integrity and fulfilment; acceptance of death | Dissatisfaction with life; regret, bitterness and despair | Wisdom |
| 26-64 years Adulthood | Generativity vs. Stagnation/ Self- absorption | Productive and creative engagement in society | Concern for future generations, sense of usefulness and accomplish- ment | Concern only for self, one's own well-being and prosperity | Care |
| 20-25 years Early adulthood | Intimacy vs. Isolation | Deep and lasting relationships | Ability to experience love and commitment | Loneliness and isolation | Love |
| 12-19 years Adolescence | Identity vs. Confusion | Coherent vocation and personality | Integrated self-image | Role confusion and weak sense of self | Fidelity |
| 6-12 years School age | Industry vs. Inferiority | Knowledge acquisition | Constant devotion to new work or task, social learning and achievement | A sense of inferiority at understand- ing and organizing | Competence |
| 3-6 years Play age | Initiative vs. Guilt | Environmental exploration | Initiative, self-direction, control and purpose | A sense of guilt and inadequacy to be on one's own | Purpose |
| 1-3 years Early Childhood | Autonomy vs. Shame and doubt | Consistent stable care from parents | Sense of autonomy, self-esteem and self- control over physical skills | Feelings of shame and self- doubt | Will |
| 0-1 year Infancy | Trust vs. Mistrust | Consistent stable care from parents | Trust, reliability, and optimism | Suspicion, fear of future events | Hope |

TABLE 6 ERIK H. ERIKSON'S EPIGENETIC DIAGRAM ADAPTED FOR PSYCHOSOCIAL DEVELOPMENT

Accordingly, the influence of the upbringing with the exclusive impact of the first imprint is obvious. Hence, it is important how much influence the individual has and

diverse determined mentors have in changing a presumably preordained pattern related to the parents.

2.7 THE IMPORTANCE OF LEADERSHIP

This section deal with how closely leadership relates to the entrepreneur and how profoundly leadership shapes the entrepreneurial personality. Hence, these challenging objectives are met by theoretical discussions of the most urgent paradoxes as outlined in the following sections.

2.7.1 ENTREPRENEURIAL DILEMMAS

The objective of defining an entrepreneur includes dilemmas as how to differentiate one type of an entrepreneur from another, the differences between an entrepreneur and a hired CEO, a manager, an inventor, an inheritor and so on, and furthermore the quandary regarding how to describe an entrepreneur, whether from behaviour, role characteristics, personality traits, and motives, or as a process or a mindset, to mention some of the options from the literature.

For instance, Baumol separates firm-creating entrepreneurs from innovating entrepreneurs (Baumol, 1991). However, the behaviour of an intrapreneur and a nascent entrepreneur overlap with the firm-creating entrepreneur's initial behaviour with the only difference being the actual time of measuring the phenomenon.

In Schumpeter's description of the entrepreneurial function, the individual acts as a leader by possessing the legitimacy of leadership:

“.. the function of entrepreneurs is to reform or to revolutionize the pattern of production by exploiting an invention or, more generally, an untried technological possibility for producing a new commodity or producing an old one in a new way, by opening up a new source of supply of materials or a new outlet for production by reorganising an industry, and so on” (Schumpeter, 2013, p. 132).

Mark Casson (2010) states that the entrepreneur is often identified as a founder of a firm or an owner-manager. Moreover, the entrepreneur is self-employed and may employ others, but an entrepreneur is never an employee. However, the Chief Executive Officers of large firms are salaried employees and therefore not entrepreneurs. This paradox is caused by reliance on an unsuitable definition of the entrepreneur (Casson, 2010, p. 249), CEOs are “entrepreneurial” in their firms even though they are not characterised as entrepreneurs due to their salary as employees, and that the misleading stereotypes of popular theories of the entrepreneur are a weakness rather than a strength.

Hence, Casson (2010) suggests a more rigorous analysis of entrepreneurs using the fundamental economic theory from 1755 (Cantillon, 1755), in the early 20th century (Hayek, 1937; Knight, 1921; Schumpeter, 1934), and the late 20th century (Baumol, 1993a; Kirzner, 1973) in line with Miriam van Praag, who summarizes the economic view on entrepreneurs from six historical classic contributors: Cantillon, Say,

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Marshall, Schumpeter, Knight, and Kirzner, who with their different perspectives on entrepreneurs remain influential on current empirical research subjects, methods and interpretations (van Praag, 1999).

On the other hand, Casson (2010) argues that, “A modern synthesis defines the entrepreneur as someone who specializes in taking judgemental decisions about the coordination of scarce resources” (Casson, 1982), which could be a precise description of a leader. The term ‘someone’ emphasises the entrepreneur being an individual (Casson, 2010, p. 251) and the judgemental decisions about scarce resources refer to ordinary leadership behaviour. Thereby, this individual with leadership tasks due to inferior employees in the entrepreneurial venture present the second dilemma along with that of the hired entrepreneur: the discussion of being either a leader or an entrepreneur in opposition to both-and. These dilemmas are thoroughly pursued further.

2.7.2 THE LEADERSHIP ROLE BEHAVIOUR IN RELATION TO AN ENTREPRENEUR

The Danish Erik Johnsen finds leadership’s essence in the individual’s managerial behaviour, which appears in the relationship between the superior and the inferior, the leader and the subordinate.

In order to approach the core of leadership, the combinations of nine types of behaviour (three cubed) create different leadership roles. With a foundation in the goal-setting factors, Johnsen distributes the leadership styles into nine operational control roles, nine adaption roles, and nine developmental roles. The entrepreneurial leader style, the Entrepreneur, belongs in the developmental group along with the Strategic Planner, the Stakeholder Analyst, the Philosopher, the Organizer, the Learner, the Communicator, the Strategist, and the Statesman. All in all, Johnsen uses 27 different roles to explain the variation and diversity of leader roles (Johnsen & Oxvig-Østergaard, 1993). Without conscious awareness of the task, individuals automatically use their preferred leadership role combination by default. However, conscious and alert leaders choose the optimal version for each assignment and aim to enhance their impact in relation to the objective by using the advantages from the relevant roles in addition to their preferred role.

Johnsen argues that management is a unique profession rooted in a unique philosophy. Thus, Johnsen built his operational management theory upon three pillars pivoting around behaviour:

1. Manager behaviour is a part of common individual behaviour, and an integration of goal setting, problem-solving and language creation behaviour.
2. Manager behaviour is an interactive process based on a group-dynamic activity.
3. The manager process is an interaction between individuals and groups performing behaviour (Johnsen, 2002).

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Hence, the individual leader must manage the integration of three different factors: goal setting, problem-solving and communication (language creation) alone or in a team as an internal ongoing “mechanism”, to accomplish the leadership role according to Johnsen (2002). Regardless, goal setting, problem-solving and communication are all involved; the factors are related with different intensity and to a greater or lesser extent according to the task and the specific individual. Hence, an individual’s leadership profile is seen as a function of time and environment, which are understood as the current level of experienced knowledge and the current quality of environmental relationships. At another point in time, the same individual might have achieved new learning, be another place, or be seriously ill and stay at home.

Moreover, Johnsen (2002) argues that a leader improves his or her leadership role through a dynamic search from a realistic world picture, and further that this exact learning matters in achieving the desired change. As an example; rude remarks from a leader cause rude replies from employees, but if the leader is conscious about the leader role, then learning might impact the future behaviour with a better work environment, and enhance results as a consequence. Thereby, actual learning is seen as a self-motivated creation of improved behaviour with a basis in the individual’s own analysis and synthesis of daily activities (Johnsen, 2002).

Likewise, Gupta, MacMillan and Surie (2004) argue that the vast leadership literature focuses on the leader’s influence on followers and emphasises the relationships among three key factors: the leader, the followers, and the landscape. They compare in their theoretical contribution the neocharismatic/transformational leadership perspective, the team-oriented leadership perspective and the value-based leadership perspective in relation to entrepreneurial leadership. First, they outline that entrepreneurial leadership has much in common with transformational leadership where the basic challenge is to change the follower’s conventional career and to secure activities for creative and entrepreneurial action. Second, they see a similarity between team-oriented leadership and entrepreneurial leadership in the leader’s high level of participation and involvement by the group, where the challenge is to constantly orchestrate changing roles in an uncertain organisational context. Third, the value-based leadership’s similarity to entrepreneurial leadership lies in the leader’s capacity to build a high-expectation vision and to convey confidence in the follower’s ability to accomplish the vision. The challenge is in the commitment of followers to use their specialized skills in the entrepreneurial task. Table 7 is a modified table from Gupta, MacMillan, and Surie (2004) comparing entrepreneurial leadership with neocharismatic leadership, value-based leadership and team-oriented leadership.

All of the attributes had national scores above the midpoint of 4 on a seven-point scale ranging from 1 (substantially impedes) to 7 (substantially facilitates) effective leadership, except for those marked with an asterisk which had scores both above and below 4. Universal attributes are those with country means of at least 6.0 and 95% national mean scores of at least 5.0. This table does not list the non-universal attributes unique to the other universal leadership models to be found only in the original source (Gupta et al., 2004, p. 255).

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| Comparing entrepreneurial leadership and other universal leadership models, modified from Gupta et al., 2004, p. 255 | | | |
|--|--|-------------------------------|---|
| Attributes | Neocharismatic leadership | Value-based leadership | Team-oriented leadership |
| Universal attributes shared with entrepreneurial leadership | Foresight Encouraging Positive Confidence builder Decisive | | Effective bargainer Informed Team builder |
| Universal attributes not shared with entrepreneurial leadership | Plans ahead Dynamic Motive arouser Motivational Excellence-oriented | Trustworthy Just Honest | Intelligent Win-win problem solver Administratively skilled Communicative Coordinator |
| Non-universal attributes shared with entrepreneurial leadership | Enthusiastic * Convincing Performance-oriented Improvement-oriented Inspirational Visionary Intellectually stimulating | Intuitive | Diplomatic Integrator |
| Non-universal attributes unique to entrepreneurial leadership | Ambitious * | | |

TABLE 7 COMPARING ENTREPRENEURIAL LEADERSHIP AND UNIVERSAL LEADERSHIP (GUPTA ET AL., 2004)

Gupta et al. (2004) argue that a certain behavioural form of leadership is required due to the increasingly turbulent and competitive environment facing business firms today. Unfortunately, their developed cross-cultural construct of entrepreneurial leadership is measured on a sample of middle managers which might explain their lack of full universal support on the individual level, but their theoretical contributions are of great value and importance. Thus, Gupta et al. found preliminary insights into the factors contributing to societal differences in the perceived effectiveness of entrepreneurial leadership. In an organisational context with components of transformational team-building and value-based leadership, they argue that leaders need to mobilize the following five specific capacities to meet the entrepreneurial challenge:

1. extract exceptional commitment and effort from organisational stakeholders,
2. convince them that they can accomplish goals,
3. articulate a compelling organisational vision,
4. promise their effort will lead to extraordinary outcomes, and
5. persevere in the face of environmental change (Gupta et al., 2004).

Moreover, the entrepreneurial leader encourages others to experiment and learn for themselves with an emphasis on a discovery-driven approach to specifying

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problematic limits and mandating strategic commitment to new business development. By creating the climate through personal modelling of these behaviours “consistently, predictably, and relentlessly”, entrepreneurial leaders ensure that others will emulate their behaviour. The mechanism is not charisma, values, or team pressure, but instead a collective spirit of conscious innovation (Gupta et al., 2004, p. 256).

| Entrepreneur’s Leadership Roles modified from Gupta et al., 2004, p. 250 | | | |
|--|--|---|---|
| Dimension | 5 Roles | Attributes | Explanation |
| Scenario enactment | Framing the challenge (specifying highly challenging but realistic outcomes for the cast of actors to accomplish) | Performance-oriented Ambitious Informed Extra insight | Sets high standards of performance. Sets high goals, works hard. Knowledgeable, aware of information. Intuitive. |
| Scenario enactment | Absorbing uncertainty (taking the burden of responsibility for the future) | Visionary Foresight Confidence builder | Has a vision and imagination of the future. Anticipates possible future events. Instils others with confidence by showing confidence in them. |
| Scenario enactment | Path clearing (negotiating opposition and clearing the path for scenario enactment) | Diplomatic Effective bargainer Convincing Encouraging | Skilled at interpersonal relations, tactful. Is able to negotiate effectively, able to make transactions with others on favourable terms. Unusual ability to persuade others of his/her viewpoint. Gives courage, confidence, or hope through reassuring and advising. |
| Cast enactment | Building commitment (building an inspired common purpose) | Inspirational Enthusiastic Team builder Improvement-oriented | Inspires emotions, beliefs, values and behaviours of others, inspires others to be motivated to work hard. Demonstrates and imparts strong positive emotions for work. Able to induce group members to work together. Seeks continuous performance improvement. |
| Cast enactment | Specifying limits (building a common understanding and agreement of what can and cannot be done) | Integrator Intellectually stimulating Positive Decisive | Integrates people or things into cohesive, working whole. Encourages others to use their mind—challenges beliefs, stereotypes, and attitudes of others. Generally optimistic and confident. Makes decisions firmly and quickly. |

TABLE 8 ENTREPRENEUR’S LEADERSHIP ROLES (GUPTA ET AL., 2004)

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Furthermore, Gupta et al. suggest that entrepreneurial leaders face two interrelated, cumulative and iterative challenges: creating a scenario of possible opportunities, called scenario enactment and convincing potential followers that transformation is possible by assembling resources, called cast enactment. From McGrath and MacMillan (2000), they adapted and modified five specific leadership roles of entrepreneurs intrinsic to the challenges, three of which are associated with scenario enactment and two with cast enactment, which are modified and outlined in Table 8.

The theoretical framework developed by Gupta et al. provides the construct of entrepreneur's leadership with these five roles and related attributes, subsumed under the two dimensions of enactment. Moreover, the roles and the attributes of Gupta et al. (2004) correspond with the 27 leadership roles of Johnsen (2002). However, Johnsen's entrepreneur role is more specific, and some of Gupta's descriptions are distributed apart from the entrepreneurial leader role into the differing creative and operation roles of Johnsen.

2.8 THE INTERSECTION OF ENTREPRENEURSHIP AND LEADERSHIP

The connection between leadership and entrepreneurs is scattered in the literature, explicit but often implicit and maybe even unconsciously within another context. So far, the literature review has been carried out in different ways leaving out a conventional systematic search. According to Papaioannou et al. (2010), there are five primary methods of literature review: conventional topic search, check of reference lists, contact with experts, citation search and pearl growing by keywords search in databases. These methods supplement each other, and separately they produce unique results. However, when the purpose is to cover a topic completely, then the conventional method with the structured topic search is the preferred way to conduct the review. Hence, another more systematic search was conducted establishing an overview of traditional academic approaches and revealing all relevant knowledge from the assumed intersection between entrepreneurship and leadership specifically at the individual level and in respect of the cross-disciplinary focus of this research.

However, this section with subsections confirms the gap related to the entrepreneurial personality being connected to leadership. Additionally, the section emphasises the theoretical field emerging in the 1990s called Entrepreneurial Leadership.

2.8.1 LEADERSHIP AND ENTREPRENEURSHIP JOURNALS

A conventional systematic accomplished search by keywords in the database Business Source Complete from EBSCO Databases was conducted. The systematic review includes selection of research sections and journals according to the ABS Academic Journal Quality Guide 2010. Accordingly, the entrepreneurship literature is found in the journals included in the section on 'Entrepreneurship and Small Business Management'. The entrepreneurship literature consists of 17 journals, two grade four journals and five grade three, from which the articles were preselected. The ABS Academic Journal Quality Guide 2010 state that top journals (Grade 4 or 4*) have the highest citation impact factors within their field. In this case, the citations additionally have become a benchmark of the interest in the subject field.

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| Entrepreneurial Leadership Personality | | | | | | | |
|---|-------------------------|--|--|---|---|---|---|
| June 2013 | | | | | | | |
| ABS Section | A B S | Journal | Leader* (AB) AND Entrepreneur* (AB) | Leader- ship AND Entre- preneurs hip (AB) | Leader- ship AND Entre- preneurs hip (SU) | Entre- preneur ial Leader- ship (AB) | Entre- preneur ial Leader- ship (SU) |
| Entre- preneurs hip and Small Business Manage- ment | 4 | Journ. of Bus.Venturing | 6 | 2 | 3 | 1 | 0 |
| | | Entrepreneurship: Theory and Practice | 10 | 4 | 11 | 2 | 2 |
| | 3 | International Small Business Journal | 0 | 0 | 0 | 0 | 0 |
| | | Entrepreneurship and Regional Development | 0 | 1 | 1 | 0 | 0 |
| | | Small Bus. Economics Journal of Small Business Management Strategic Enterpr.ship Journal | 1 10 0 | 0 2 0 | 1 2 0 | 0 2 0 | 0 2 0 |
| General Manage- ment ⁹ | 4 | Academy of Management Review | 0 | 0 | 1 | 0 | 0 |
| | | Academy of Management Journal | 3 | 2 | 2 | 0 | 0 |
| | | Adm. Science Quarterly | 3 | 1 | 2 | 0 | 0 |
| | | Journal of Management | 2 | 8 | 7 | 3 | 0 |
| | | Journ. of Man. Studies | 1 | 3 | 5 | 0 | 0 |
| | British Journal of Man. | 1 | 1 | 1 | 0 | 0 | |
| | 3 | California Man. Review | 6 | 0 | 5 | 2 | 0 |
| | | Int. Journal of Management Reviews | 2 | 0 | 1 | 1 | 0 |
| | | Acad. of Manag. Persp. | 1 | 0 | 1 | 0 | 0 |
| | | Journ.of Man. Inquiry | 3 | 0 | 3 | 0 | 0 |
| Organization Science | | 4 | 2 | 3 | 0 | 0 | |
| Organi- zation Studies | 4 | Organization Studies | 4 | 1 | 0 | 0 | 0 |
| | | Leadership Quarterly | 4 | 2 | 3 | 1 | 0 |
| | | Human Relations | 2 | 0 | 0 | 0 | 0 |
| | | Research in Org.Behav. | 0 | 0 | 0 | 0 | 0 |
| | 3 | Org. Research Methods | 0 | 0 | 0 | 0 | 0 |
| | | Group and Org.Manag. | 0 | 0 | 0 | 0 | 0 |
| | | Organization | 0 | 8 | 11 | 2 | 0 |
| | | Org. Dynamics | 7 | 0 | 3 | 0 | 0 |
| | | 70 | 37 | 66 | 14 | 2 | |

TABLE 9 LITERATURE REVIEW IN ENTREPRENEURSHIP AND LEADERSHIP JOURNALS, JUNE 2013, ABS

In short, the search was conducted for all papers in Entrepreneurship Journals (according to ABS Academic Journal Quality Guide 2012) with the Boolean search

⁹ *Harvard Business Review* (4) and *MIT Sloan Management Review* (3) are not included due to the limitation for Academic Journal, but they have several hits. Similarly, the leadership theory of Johnsen is missing due to the grading of the Danish journals below 3.

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string Leader* in abstracts (AB) and subject terms¹⁰ (SU), and with the limiter Academic Journals in the Business Source Complete database. Double entries were deleted, and all keywords compiled from the articles were used in the analysis. The search for leadership in the entrepreneurial literature in the framing of the ABS Academic Journal Quality Guide is outlined in Appendix 2 and in Table 9.

The section on Entrepreneurship and Small Business Management is represented with two Grade Four journals (Journal of Business Venturing and Entrepreneurship, Theory and Practice) and five Grade Three journals (ISBJ, ERD, SME, JSBM, and SEJ¹¹). The authors are listed according to the publishing year to clarify the increasing number of articles. Some articles were published in the same journal, for instance Dess et al. (1999) and Sharma & Chrisman (1999), and Gagnon et al. (2000) and McCline et al. (2000), which indicates an interest from the publisher and the reviewers.

Unfortunately, the literature review found, as a response to Casson's (2010) suggestion of rigorous analysis by the economic theory of entrepreneurs, that the articles are scant in regard to the individual entrepreneur and the individual leader, and even more scant in regard to the personality of the individual entrepreneurs and leaders. Thereby, development of a new theory becomes necessary as a supplement to create theory analyses of practical use.

The traditional field of entrepreneurship and leadership literature is in the sections Entrepreneurship and Small Business Management, General Management, and Organizational Studies in the database Business Source Complete, which amount to 9% of the 821 journals (ABS Journal Guide) and the search was conducted for Entrepreneur* AND Leader* in abstract with the limitation of academic journals. This limitation excludes, for instance, *Harvard Business Review*, which actually had 41 papers.

An inspection of the selected articles reveals the themes of theory and theory development, for instance, by investigating six different schools of entrepreneurship (Cunningham & Lischeron, 1991), and investigation of the level of environmental dynamism moderation on new venture performance and how it influences entrepreneurs' leadership behaviour (Ensley, Pearce, & Hmieleski, 2006). In relation to the personality, the articles encompass descriptions on miscellaneous investment activities and boards (Daily & Dalton, 1993; Duxbury, Haines, & Riding, 1996; Whistler & Wichmann Jr., 1979), investigation on generational succession in family-owned enterprises (Davis, Allen, & Hayes, 2010; Stavrou, Kleanthous, & Anastasiou, 2005), and findings about success by practicing (Fabling & Grimes, 2007). Furthermore, the articles encompass investigations on the ability of executives to focus on strategy (Kuratko & Audretsch, 2009).

¹⁰ Commonly called keywords

¹¹ International Small Business Journal, Entrepreneurship & Regional Development, Small Business Economics, Journal of Small Business Management and Strategic Entrepreneurship Journal

However, scholars find that the entrepreneurship research is parallel to the leadership research with the advantage of being able to learn from the previous results from the leadership research (Baum & Locke, 2004; Chandler & Lyon, 2001; Cogliser & Brigham, 2004; Hisrich et al., 2007; Low & MacMillan, 1988; Vecchio, 2003; Wiklund et al., 2011).

2.8.2 A SEARCH THROUGH KEYWORDS

Since the keywords are identification for the article selected by the author and indirectly by the journal due to themes of the journal or special issue, they cut directly to the essence of the articles. Hence, the most relevant keywords are naturally entrepreneurship and leadership, and organisational behaviour characterising the intersection. Hereafter the keywords are: Executives, Executive ability, Executive attitudes, Strategic planning, Controllership, Businesspeople, Businessmen and Businesswomen, Leaders, Social Exchange, Behavioural Economics, Core competencies, Competition, and Supervision as well as single personality traits such as: Uncertainty, Decision making, Performance, Behaviourism, Business intelligence, Opportunity and Environmental scanning¹². The latter is a rare occurrence but corresponds with the findings on Success Personality (Østergaard, 2003).

Keywords from the search string Leadership in the ABS section: Entrepreneurship and Small Business Management outlined: Leadership (33), Entrepreneurship (24), Business enterprises (16), Small business (14), and Industrial management (14), Family-owned Business enterprises, which actually just refer to the areas of the articles, followed by: United States (8), Small Business – Management (8), Strategic planning (7), Organizational behaviour (7), Executives (7), Business Planning (7) and Executive ability (Management) (6). In relation to the individual level, the latter three keywords are the most interesting.

The prosaic keyword analysis shows that there are only a few personality-related keywords, the individual level is missing in entrepreneurship literature exemplified by keywords, and the intersection of leadership and entrepreneurship is scant.

2.8.3 THE PERSONALITY OF THE ENTREPRENEURIAL LEADER

On the other hand, the articles that address the individual entrepreneur and more personality-related issues concerns for example the importance of how over dependent a firm's survival and growth is to a few key individuals in terms of transitions and generally in decision-making. Moreover, Charan et al. argue that entrepreneurial commitment and leadership are central to the success of ventures and that one cannot underestimate the importance of the individual entrepreneur in this process (1980). In addition, the inherent factors of entrepreneurial success were investigated (Walske & Zacharakis, 2009), as well as opportunity as a component of the entrepreneurial process (McCline et al., 2000).

¹²Of note, Wilford White has published an article with the same title: "What's new in Washington" four times in the JSBM in 1972, 1974, 1976, and in 1977 with different keywords, but only the article from 1972 has Leadership as a keyword.

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However, none of the empirical research was conducted on the individual level, the current majority of scholars prefer to describe entrepreneurial characteristics instead of entrepreneurial skills, talent or personality, and the majority of the current articles and books concern theoretical issues and the firm level instead of the individual level.

In conclusion, the literature review indicates a need for solid theoretical analyses based on empirical data concerning the personality of the individual entrepreneur and leader. On the other hand, keywords like Businessmen, Business people, Chief Executive Officers and Executives demonstrate an interest in the personal aspect. The keywords Decision making, Executive ability, Organizational behaviour, and in some cases Personnel management, demonstrate interest in the way that these entrepreneurs and leaders behave and thereby confirm the behavioural approach as sustainable. The personality of an individual entrepreneur is primarily addressed in quantitative measurement on single traits or in case stories (Kets De Vries & Florent-Treacy, 2003; Kets De Vries & Engellau, 2004; Sandberg, 2003; Strubler & Redekop, 2010).

In fact, the greatest barrier to find articles concerning the individual entrepreneur is presumably the limitation of using high-ranked journals as most of the literature deals with the firm level, the strategic level, the theoretical level and to some extent the family business level.

2.8.4 THE ENTREPRENEURIAL LEADER

Consequently, the search is bereft of personality and personality traits that explain the entrepreneurial leader's behaviour. For this reason, the review is expanded with the search string Entrepreneurial Leadership due to its appearance in the first search. The result is five articles on entrepreneurial leadership in the entrepreneurial literature: "Entrepreneurial Leadership: Developing and Measuring a Cross-Cultural Construct" (Gupta et al., 2004), "Perceptions of Entrepreneurial Passion and Employees' Commitment to Entrepreneurial Ventures" (Breugst et al., 2012), "Case Study: Roustam Tariko: Russian Entrepreneur" (Sandberg, 2003), "From Entrepreneurial to Professional Management: A Set of Guidelines" (Charan et al., 1980), and "Mission Statements in Small and Medium-Sized Businesses" (O'Gorman & Doran, 1999).

The two entrepreneurship journals with the largest number of articles on the theme Entrepreneurial Leadership Personality are: *Entrepreneurship: Theory and Practice* and *Journal of Small Business Management*. The journal *Entrepreneurship: Theory and Practice* leads with 11 published articles with the two keywords Leadership and Entrepreneurship and also two articles with the keyword Entrepreneurial Leadership in the period up to June 2013 (see Table 9). Hence, it is suggested that entrepreneurial leadership to some extent represents the intersection of leadership and entrepreneurship.

Throughout, the tables illustrate that the number of articles is limited in the literature review of the intersection of entrepreneurship and leadership. Furthermore, the content of the articles is scant of entrepreneurial leadership research on an individual level, and therefore an academic gap is identified. An analysis of authors of these articles indicates that the research field is dominated by relatively few established

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scholars working together with room for new scholars entering the field. However, as a “backwards reflection”, the search would improve by a search string of entrepreneurial leader instead of entrepreneurial leadership. All in all, the explorative analysis of the systematic literature review establishes an overview and revealed the Entrepreneurial Leader as an emerging theoretical concept.

CHAPTER 3. CONCEPTUALIZATION

*“If One Is Truly to Succeed in Leading a Person to a Specific Place, One must First and Foremost Take Care to Find Him Where **He** Is and Begin There.”*

Søren A. Kierkegaard¹³

In this chapter, a conceptualization of the entrepreneurial personality is processed as a consequence of the revealed gap in the literature review in Chapter Two. The literature review was conducted cross-disciplinary in the research field of entrepreneurs and psychology with the purpose of including relevant literature and exploring the essential issues.

Hence, the literature review trawled through entrepreneurial frameworks, entrepreneurial definitions and typologies, the entrepreneurial personality looking into the concept of personality, the measurements of personality and external influences at the personality, and finished with the entrepreneurial leadership and the intersection of leadership and entrepreneurship to emphasise the ability to undertake.

Across the subjects from the literature review, new themes emerge due to an overlap, interesting cohesions appear besides remarkable lacks of fundamental issues regarding the entrepreneurial personality. These themes are exposed, reflected upon, and conceptualized in this chapter.

In fact, the main research question to pursue appears through the literature review concerning the entrepreneurial personality and especially the general gap identified is about: *How is the entrepreneurial personality constituted?* Accordingly, the conceptualization also serves to identify the sub-questions to investigate in regard to answering the main research question.

Moreover, the notion is that research on the entrepreneurial personality first and foremost needs to distinguish between stable and changeable parts of the entrepreneurial personality due to the massive confusion revealed in the literature review on how to conceive the essence of an entrepreneur. Consequently, the point of departure differentiates between innate traits and outer issues impacting the

¹³ “This is the secret in the entire art of helping. Anyone who cannot do this is himself under a delusion if he thinks he is able to help someone else. In order truly to help someone else, I must understand more than he—but certainly first and foremost understand what he understands. If I do not do that, then my greater understanding does not help him at all. If I nevertheless want to assert my greater understanding, then it is because I am vain or proud, then basically instead of benefiting him I really want to be admired by him. But all true helping begins with a humbling. The helper must first humble himself under the person he wants to help and thereby understand that to help is not to dominate but to serve, that to help is not to be the most dominating but the most patient, that to help is a willingness for the time being to put up with being in the wrong and not understanding what the other understands” (Kierkegaard, 1998).

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entrepreneurial personality and takes into account the context in which the entrepreneur operates, which is outlined in the a priori model:

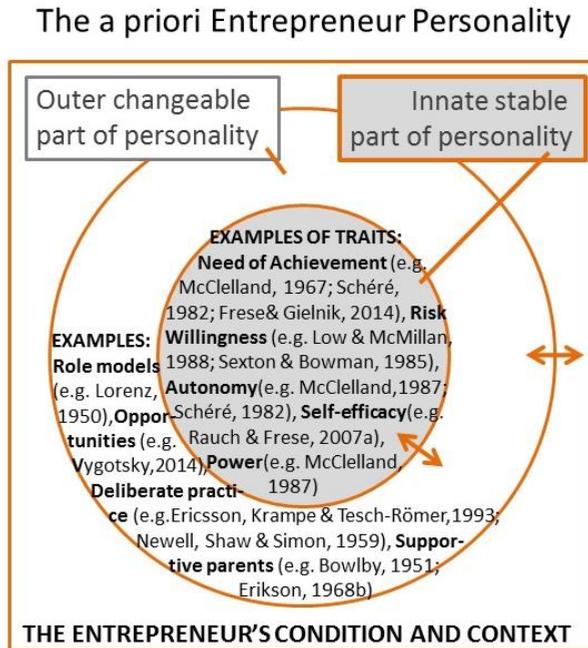


FIGURE 3 THE ENTREPRENEURIAL PERSONALITY A PRIORI

The main themes revealed from the literature review and based on the a priori model to be processed into a conceptualization and to assist in identifying the research sub-question are:

First, a model outlining the fundamental framing in which we operate regarding entrepreneurs is presented together with a working definition of the entrepreneur to clarify the basic perception of this research.

Second, these cornerstones are further amended with the processed knowledge of personality revealed from the literature review including the development of a definition of the concept of personality and the development of a model displaying the stable and the varying part of the personality with influence of the early contextual factors.

Third, the intertwined leadership in relation to entrepreneurs is further handled. Finally, the measurement instruments used to interpret the entrepreneurs is discussed and the main point developed into a model, and the chapter end with a formulation of the sub-question of this research and the issues that need to be investigated empirically.

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The selected themes are connected and display the central subjects of explaining and understanding the entrepreneurial personality thoroughly.

3.1 PSYCHOLOGICAL FRAMEWORK OF ENTREPRENEURSHIP DEVELOPED

A sustainable framework around entrepreneurs includes psychology to map the common human mechanisms and the more specific mechanisms that determine the entrepreneurial personality. Hence, the action characteristic model of Frese and Gielnik (2014) (see Figure 1) is the starting point of developing the framework further.

Another indisputable cornerstone is the question about the definition of an entrepreneur. Academics do not yet agree on one definition of an entrepreneur due to a discussion that revolves around the entrepreneur in two main avenues.

The first avenue consists of the contradiction between the term entrepreneur as occupationally related instead of a universal concept related to the personality. The second consists of the contradiction between the entrepreneur as a fixed measurable time period in a specific age related to specific tasks versus a lifelong personality interfering all activities.

A solution with several definitions instead of one that scholars agree on will not solve the problem unless these definitions are clear and unequivocal. In relation to research on a cohort of students with no entrepreneurial record, the premise that being an entrepreneur is innate would be appropriate, as the conception of being an entrepreneur as a learned ability is self-contradictory.

Hence, a precise definition of entrepreneurs is preferable and therefore pursued in this section and afterwards. In addition, a precise definition goes along with the establishment of a typology characterising the diversity of entrepreneurs, which is also discussed in later chapters.

3.1.1 THE ACTION CHARACTERISTIC MODEL DEVELOPED

The Giessen-Amsterdam model with the entrepreneurial action characteristics factors of entrepreneurship according to Frese and Gielnik encompass a phase differentiation. However, the relevance of a phase differentiation is only theoretically; in practice the phases are overlapping due to several concurrent product developments and the entrepreneurial trial and error approach. In case of failures, the entrepreneur searches for new opportunities at several levels or in different phases simultaneously.

In continuation and with the aim of developing a sustainable framework comments are added to the current Giessen-Amsterdam Model of Frese and Gielnik. The comments question the distribution of factors and especially the factor content due to diffusion of concepts and overlap that affect the academic discussion and make the factors unmeasurable. The Action Characteristic factors with comments are outlined in Table 10.

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| The Action Characteristic factors of entrepreneurship (Frese & Gielnik, 2014) | | Comments |
|---|--|--|
| Personality | Need for achievement, locus of control, autonomy, generalized self-efficacy, innovativeness, stress tolerance, and risk-taking | The difference between generalized self-efficacy and self-efficacy from motivational antecedents is vague. |
| Motivational/ affective antecedents | Passion, positive/negative affect, self-efficacy, and entrepreneurial orientation | Some of the antecedents are innate (self-efficacy), some more conceptual (entrepreneurial orientation), and some related to the actual situation and the mood of either the entrepreneur or the relevant relation (passion, positive/negative affect). |
| Action characteristics | Personal initiative, goals/visions, search for opportunities, information search, planning, feedback processing, social networking, seeking a niche, seeking resources, deliberate practice, and entrepreneurial orientation | The actions or behavioural activities differ in content. A goal or a vision as well as an entrepreneurial orientation can be an antecedent of action with problem-solving, search and practice, but hardly an action. |
| Cognitive and social preconditions | Education (school, occupational), mental abilities, and models in family or environment | Cognitive preconditions are both innate skills and developed skills acquired before an action takes place. The innate intelligence level will not increase, but the level of knowledge does due to learning from imitation, education, occupation or from life experiences. According to the individual's preference at a specific moment, learning is either sought out or neglected. |
| Cognitive antecedents | General and specific knowledge, tacit knowledge, entrepreneurial orientation, expertise (practical intelligence), and heuristics/biases | A heuristics or bias towards entrepreneurship and the entrepreneurial orientation seem to be either innate or imprinted in the early childhood. On the contrary, expertise and knowledge, being general, specific or tacit, depends on the environmental impact and for instance, deliberate practice. |
| Environment | Life cycle, dynamism, unpredictability, hostility, and industry, where the terms unpredictability, hostility and friendly are most significant. | The match between the selected entrepreneurial business and the industrial environment matters, along with the individual's ability to fulfil the necessary requirements. The life cycle and the dynamism are more connected to the entrepreneur than the environment. |
| Entrepreneurial success | Phase I: Opportunity identification, Phase II: Refinement of business concept and resource acquisition, and Phase III: Survival and growth | The entrepreneurial success is at the same time defined by survival and growth of an enterprise after launching. Hereby, even mergers and acquisitions are covered, because the enterprise has to reach a certain level to be appealing to a buyer. |

TABLE 10 THE ACTION CHARACTERISTIC FACTORS BY FRESE AND GIELNIK (2014) WITH COMMENTS

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The notion is that the distribution of elements has room for improvement to diminish the mutual correlation. In order to avoid interference between the factors, an alternative distribution of the factor elements mentioned by Frese and Gielnik is suggested as follows in an alphabetic order:

| Action Characteristics of an entrepreneur, developed | |
|--|---|
| Entrepreneurial actions or behaviour | Deliberate practice; Planning; Search for information, for niche and for opportunities; Social networking |
| Individual preconditions | Education (school, occupational); Entrepreneurial orientation, Expertise (practical intelligence); Goals; General, specific and tacit knowledge; Mental abilities; Seeking resources; Visions; Life cycle |
| Personality | Autonomy, Biases, Dynamism, Heuristics, Innovativeness, (Personal) Initiative, Loss of control, Need for achievement, Passion, Risk taking, (Generalized) Self-efficacy, and Stress tolerance |
| Social and environmental preconditions | Feedback processing, (Hostility changed to) Readiness, Industry, Models in family or environment, Positive affect, (Un-) Predictability |

TABLE 11 THE ACTION CHARACTERISTICS FACTORS, DEVELOPED

Consequently, the current Giessen-Amsterdam model should be altered in terms of usability for theory and practice to an Entrepreneurial Action-Characteristics model as outlined in Figure 4.

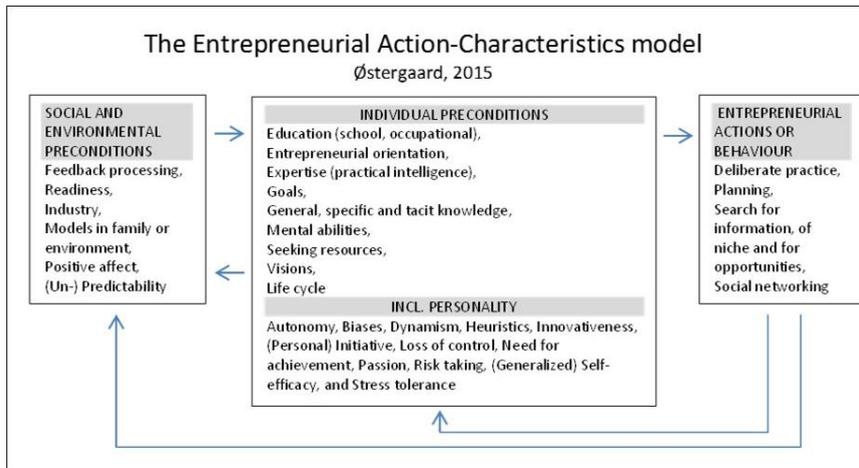


FIGURE 4 THE ENTREPRENEURIAL ACTION-CHARACTERISTICS MODEL

In accordance with the new Entrepreneurial Action-Characteristics model and as recommended by Frese and Gielnik, the investigation can now focus on the individual preconditions, but firstly a basic definition is reflected upon with the purpose of establishing a sustainable framework for exploring the entrepreneurial personality.

3.1.2 REFLECTIONS ON THE ENTREPRENEUR DEFINITION

A definition of an entrepreneur is pursued, against the odds: Ward et al. (1999) argues that phenomena in general are not observable, but data are recordings or reports that are perceptually accessible since they are observable and open to public inspection as personality test scores, verbal reports, and behavioural observations. Likewise, Gartner (1994) states that the phenomenon is inherently complicated, equivocal, and large, but by simplifying and specifying, it will help us to hold on to parts of the problems but not solve the problem. “Entrepreneurship will not yield to a definition agreed to by all” (p. 30).

However, as an extension to the definitions of Hébert et al.’s (2006), Carree and Thurik (2003, p. 437) and the classic perception of an entrepreneur by Schumpeter in section 2.2.1, a working definition is developed. The definition also builds upon the eight identities of an entrepreneur (see Table 1) and points at a dynamic individual who is active, innovative, and in charge of people, resources, decisions and specific tasks (Hébert et al., 2006, p. 261):

The entrepreneur is a person who undertakes responsibility for a challenge, job or task which includes both being in charge and in action.

The working definition will undergo further development, but a definition of an entrepreneur, at least a working definition, is basic to understand an entrepreneur and the behaviour of an entrepreneur throughout the investigation of the entrepreneurial personality. The final definition is presented in Part III developed abductively through themes from the conceptualization, the empirical results and the analysis hereof.

3.2 THE ENTREPRENEURIAL PERSONALITY, REVISITED

Despite the ongoing discussion started by Gartner (1985; 1988) about the uselessness of the concept of personality regarding entrepreneurs, new aspects of the concept of personality will be presented. The purpose is to achieve a contemporary comprehension that advocates for the usability of personality including personality traits in understanding an entrepreneur. However, a renewed approach calls for clarifications and exactness demonstrated during the literature review.

Based on the literature review, where the concept of personality was outlined together with typologies, external influences at the personality, and measurements of personality, this section discuss and conceptualize the presented knowledge of personality by developing a definition of the concept of personality and a model displaying the stable and the varying part of the personality with influence of the early contextual factors followed by reflections on deliberate practice by choice. Finally, a theoretical abductive attempt to pinpoint the essential traits of solely an entrepreneur is presented.

3.2.1 A CURRENT DEFINITION OF THE CONCEPT OF PERSONALITY

There are two primary benefits for theory and practice development via research of the concept of personality. First, the parameters are outlined that are measurable and opposite adequate measurement tools is reflected. Generally, the test-retest reliability

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is high, measured the right way. Second, the traits that express the core personality in relation to an entrepreneur is presented on the basis of a full personality profile. Successively, a contemporary model of personality is needed¹⁴ to supersede Freud's model from around the 1900s.

Generally, the personality refers to the descriptions of a person in terms of behaviour, values, intelligence, motives, knowledge, or in regard to cognitive style in problem-solving. The concept also characterises famous people, indicating that personality is a kind of charisma and something special only to be experienced by a few. In terms of avoiding these misunderstandings, the concept of personality concentrates on the universal human being contemporary with a particular focus of the entrepreneur.

In fact, the concept of personality is of neutral value in psychological terminology. The first Norwegian professor in psychology, Harald Schelderup, defined the concept of personality in 1959¹⁵: "By personality, we understand the more or less tight but holistic organised way, in which it is characteristic for an individual to act in thought, feeling and behaviour" (Kaufmann & Kaufmann, 2008). Thereby, personality can be defined as enduring dispositions that are stable across situations and over time (Costa & McCrae, 1988).

Personality is a complex concept in which the parameters of thoughts, feelings and behaviour are vital to grasp what actually takes place. However, I prefer the term perception rather than feelings due to basic influences (e.g. Witkin et al., 1954). Moreover, feelings are impacted massively from outer conditions, for example parents (e.g. Erikson, 1968b). Perception, in my understanding, conveys the feel of the stable characteristics that exhibit regularity in a unique composition distinguishing a person's appearance from that of others. Hence, more precisely:

DEFINITION 1 OF THE CONCEPT OF PERSONALITY

Personality is defined as a specific individual's steady organized conglomerate of psychological characteristics which in a unique differentiation creates current recognisability and future predictability in relation to perception, thoughts and behaviour.

The definition emphasises perception, thoughts and behaviour due to the interrelationship and none of them standing alone. Furthermore, the definition secures recognisability and predictability simultaneously, and personality is seen as relatively stable and exhibiting regularity. Recognisability is seen, when grand-parents, parents, children and grandchildren exhibit homogenous personality characteristics. Likewise, predictability becomes visible when someone predicts a specific behaviour of a relative based on intimately relationship. However, long lasting pressures without

¹⁴ A contemporary model, Gaia, with primordial forces, leadership and principles is developed (Østergaard, 2003, p. 154 - 158) but not included in this research due to limitation.

¹⁵ Translated from Norwegian

consolations, such as unemployment and severe disasters, influence some people to develop stress disorders and depression.

In addition, amendments from the generally applicable definition of personality will improve the entrepreneurial action-characteristics model (see Figure 4).

3.2.2 CONSIDERATIONS ABOUT THE PSYCHOLOGICAL VARIABLES AND INVARIABLES

Personality traits, the relative constant and lasting aspects of the personality, are seen as the structure of personality. Beside or opposite is the process that refers to the dynamics and the incidents that explain human behaviour (Kaufmann & Kaufmann, 2008). Thus, the Kaufmann Structure is embodied in the invariable traits and the Kaufmann Process embodied in the outer time and environmentally dependent psychological variables. The process with psychological variables affects the current pattern of personality throughout life from upbringing and during learning and experiences. The converse is true of the innate personality traits, which evolve slightly over time but not overnight. Invariable personality traits change only by considerable or long-standing pressure in nature and extent.

Unfortunately, incomplete and overall descriptions together with mixed concepts are not immediately comparable in measurement because the levels differ; Schumpeter (1931) includes the entire entrepreneur with The Creative Destructor, and McClelland (1961, 1975 & 1987) collects the entrepreneur's motivation, behaviour and the personality traits in one unit with Need for Achievement (high achievement), Autonomy (need for autonomy), Independence, Motivation, and Power. Kets de Vries (2009) picture an unmeasurable map of an individual entrepreneur with his descriptions: An individual coming from a tough childhood turning tables to be an entrepreneur along with: a need for control, a sense of distrust, a desire for applause, a tendency to 'split', scapegoating, and the flight into action. Likewise, Miller et al. (1982) describe entrepreneurs as moderate risk-takers, anxious and inner-directed with an internal locus of control.

Except from the ones by McClelland, most descriptions of entrepreneurs are changeable elements that depend on the given moment, social and/or environmental circumstances. More distinctively, Kets de Vries uses the influence from the mother to explain the entrepreneurial life cycle from feelings of helplessness, dependency, and rejection to proactive style with power, control and autonomy in the footsteps of Freud (2009).

Certainly, a life span's influence is unique for each individual and includes a copious amount of impact from variable elements. However, there is no evidence that a successful entrepreneur must emerge from a sad and bad childhood: in nine comprehensive case studies six successful individuals had a childhood dominated by death, violence, sickness and/or absence, but the opposite upbringing propelled the other three successful persons (Østergaard, 2003).

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Apparently, the outer psychological variables are concrete, obvious, comparable and measurable in opposition to the abstract inner psychological invariables, which have to be measured through a sample of opaque items in order to achieve valid results.

Hence, the a priori model of the entrepreneurial personality (see Figure 3) has been further developed as a reaction to factual observation of diffuse categories (Weick, 1999) as outlined in Figure 5.

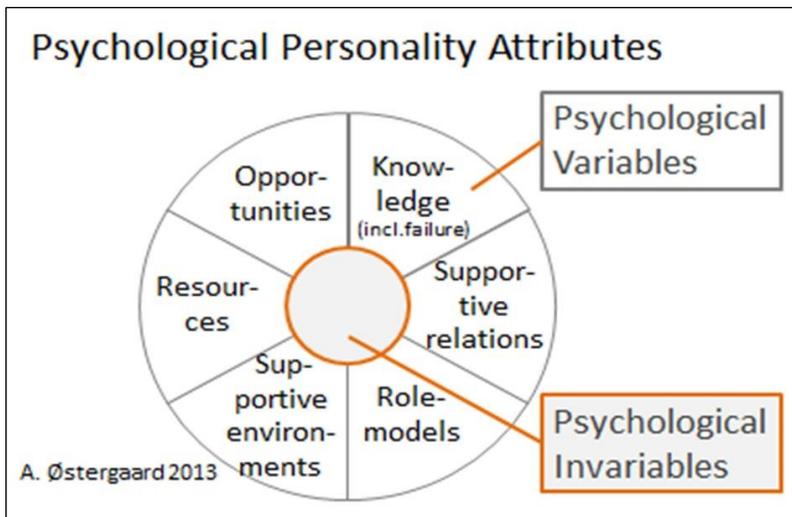


FIGURE 5 THE PSYCHOLOGICAL PERSONALITY ATTRIBUTES MODEL (THE PSYCHOLOGICAL VARIABLE WHEEL)

The model outlines the entrepreneurial personality attributes, including the psychological invariables, which are recognized through generations, and the psychological variables, which are changeable. In more detail, the psychological variables are seen as elements of a tire on a wheel with the psychological invariable in the centre as demonstrated in Figure 5. The wheel rotates and today is unlike yesterday, because the psychological variables change in opposition to the psychological invariable in the middle.

The psychological variable elements are composed from the current knowledge and include the learning from failures, the quality and quantity of supportive relations, for example parents (Bowlby 1951; Erikson, 1968b) and spouses (Pierce, Dahl, & Nielsen, 2013), the role models during childhood (e.g. Lorenz, 1950) and later, the positive or negative strokes from life-changing events, the contemporary amount and content of resources, and the number, frequencies, accessibility and quality of opportunities (e.g. Vygotsky, 2014). Thus, the outer personality variables matter to an individual entrepreneur in for example, the available opportunities, resources and supportive relations and environment in Sahara that stand out from the corresponding ones in Silicon Valley.

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Hence, the psychological variables depict the information an entrepreneur bases decisions on, which supportive relationships that are available at a specific moment, and what kind of role models that dominated throughout their childhood and outlines the current resources, the current support from the environment and the current amount and quality of opportunities. Some of these variables are unknown, but the conscious variables are countable according to the specific choice of time and respective environment and comparable with other datasets. Thereby, the process is captured by replicable measurements.

Generally, the entrepreneurship process is seen as a multiphase process consisting of entrepreneurial intent and opportunity search, discovery/recognition, evaluation, and exploitation (Eckhardt & Shane, 2003; Shook, Priem, & McGee, 2003). Moreover, the results of the entrepreneurship process are typically measured in terms of financial performance (Hisrich, Peters, & Shepherd, 2005), but both economic and noneconomic outcome variables are important given that venture creation is often a rewarding outcome in itself (Hisrich, 2000; Hisrich et al., 2007).

In fact, Boyle argues that the Five Factor model should be replaced with an expanded and altogether more inclusive model of dynamic personality structure (2008, p. 21) and the optimal framework to measure any individual ought to cover the full picture of psychological variables and psychological invariables plus the process, which means that longitudinal studies are desirable (Davidsson, 2005; 2008; Gartner et al., 1994; Gartner, 1988; Hisrich et al., 2007; Valencia-deLara & Araque-Hontangas, 2012).

In addition, Kuratko supports the idea of entrepreneurship as a discipline that can be taught and learned (2003; 2004; 2005), and in summarising the evidence from graduated MBA students indicating that entrepreneur education is associated with entrepreneurial activity and success Katz noted, "Although evidence is widely dispersed and unintegrated, the effort does seem to work" (2007, p. 209). Hisrich et al. (2007) continue arguing that characteristics associated with entrepreneurial success, such as achievement motivation, can be learned via training.

In line, McClelland and Winter conducted an achievement motivation training program for entrepreneurs, where small businessmen in India were trained how to think, talk, and act like people with high scores on Need for Achievement (*nAch*) (McClelland & Winter, 1969). After two years of training, the results indicated that there was an increase in business activity, and similar achievement motivation training for minority business people in the United States was associated with an increase in monthly sales, personal income, and profit six months after training (Miron & McClelland, 1979). However, even experienced, motivated, and visionary entrepreneurs may benefit from education when their firms expand or change direction (Shane, 2000).

Thereby, talent development from an entrepreneurial perspective becomes interesting and the model of Psychological Personality Attributes is suggested being a tool for measurement hereof. Since the DNA molecular evidence is absent, psychological

testing is the next best option until a Gene-Environment approach rule out the traditional hypothesis of the proposed “entrepreneurship gene” (Hisrich et al., 2007, p. 584). However, the notion is that the possibility exists of finding innate coherence of an entrepreneurial personality through generations by investigating the traits.

3.2.3 REFLECTION ON THE UPBRINGING OF AN ENTREPRENEUR

The ongoing discussion of nature and nurture in understanding the entrepreneur is central and must continue simultaneously with the development of adequate measurement instruments. However, adding theory from developmental psychology science enhance the knowledge revealed from the literature review.

Thus, Erikson’s epigenetic diagram (see Table 6) displays eight stages, where a successful outcome in each stage is crucial for the ongoing personality development in relation to the individual’s constitution and lifestyle in the subsequent years and stages. According to Erikson, an individual who does not achieve a successful outcome from a previous stage must return and “live through the activity” by means of consistent, stable and caregiving substitutes. In a more contemporary scholastic interpretation, the individual will develop by moving forwards and backwards at a different tempo according to the individual’s external impacts, and hopefully during a lifespan eventually missing positive outcomes will be picked up in later backwards steps.

Thereby, the key factors according to the personal development of entrepreneurs take place especially in the earlier stages from newborn till the year of twelve. For example, the development of trust, reliability, and optimism in relation to hope; the sense of autonomy, self-esteem and self-control over physical skills in relation to willpower; initiative, self-direction, control and purpose in relation to environmental exploration, and the development of competences in relation to constant devotion to new ideas and tasks, social learning and achievements. Afterwards, the sound development of coherent vocation and personality to be productive and have a creative engagement in society matters in opposition to only concern for oneself (Erikson, 1956; 1964; 1968a; 1968b; 1980; 1994; Erikson & Erikson, 1998).

Everyone develops through these stages, including becoming, active and retired entrepreneurs. In perspective of developmental psychology, the autonomy is strengthened between ages 1 to 3 years, where the child moves outside the secure base by loosening the attachment of the parents (Bowlby, 1960; 1976; 1982; 2012). In this period, children want to do things themselves and they need to try them again and again. From 3 to 6 years, initiative is rehearsed by taking steps into the proximal zone of development (Brown, Ferrara, & Wertsch, 1999; Vygotsky, 2014), and the children need space to develop in their own direction. Industry and endurance are practiced deliberately from 6 to 12 years (Ericsson, 2003b; 2008; Newell, Shaw, & Simon, 1959; Simon, 1975; 1978). Finally, the entrepreneurial identity is formed between the ages of 12 and 19 years by e.g. role models (Lorenz, 2002; 1950). In fact, nurture impacts the individual’s functional condition especially in early childhood and whether the individual is more or less resilient, vulnerable, altruistic, egocentric, rebellious and submissive. For instance, an entrepreneur is seen opposite submissive.

Lorenz states that the post-pubertal age seems to drive some human beings to have an overpowering urge to espouse a cause, and if they fail to find a worthy one, they may become fixated on astonishingly inferior substitutes (Lorenz, 2002, p. 258).

Hence, the psychological variable wheel (see Figure 5) is additionally magnified. Moreover, the pattern of development beginning in the early childhood is necessary to be aware of to avoid development into, for instance, a neurotic lifestyle or feeling deprived, instead of into an entrepreneurial lifestyle. Hence, an optimal entrepreneurial development takes its departure in the preconditions stemming from the childhood, which should be acknowledged and thoroughly considered in educational purposes and for policy makers. If someone does not thrive in their family or their workplace, they can either break down or break out.

3.2.4 SUCCESSFUL ENTREPRENEURS' TALENT DEVELOPMENT

Scholars have been discussing whether talent is born or made since Charles Darwin's cousin, Francis Galton, introduced the Hereditary Genius (Galton, 1869). The main theoretical argument for talent development follows in the path of Herbert Alexander Simon from his first discovery of the necessity of 10 years of practice (Ross, 2006) to K. Anders Ericsson refining it to 10,000 hours of exercise of practice based on his study of professional violinists (Ericsson, Krampe, & Tesch-Römer, 1993). Indeed, gifted children are born now and then. However, Ericsson argues that deliberate practice is needed to fulfil the innate opportunities, but, based on research results of the myelin of neurons, it is necessary to use nature of practice and not repetition (Coyle, 2009).

Originally, Chase and Simon (1973) investigated the eye movements of chess players to analyse their perception method. Simon et al. (1987) found that experts used a system where they formed groups of interrelated information into chunks. Based on their investigation of chess champions, Prietula and Simon (1989) found that an expert recognizes and remembers around 50,000 different chunks of information, which takes more than 10,000 hours to achieve from a systematic experience within the topic. Moreover, the experts of any field reorganize the many profound analyses into patterns, which subsequently are recognized intuitively and immediately. In particular, the ability to ignore irrelevant patterns and focus on relevant and critical patterns seems to be a shortcut to successful coping (Chase & Simon, 1973; Newell, Shaw, & Simon, 1958; Newell & Simon, 1972; Prietula & Simon, 1989; Simon et al., 1987).

In other words, talent is defined as a combination of analysis and intuition, where intuition is built upon accumulated sub experiences that are collected in patterns over time. An advantage specifically for entrepreneurs due to their daily challenges is to cope quickly and smart with more simplicity than others to become ahead competitors.

Gagné describes 10 positively stated commandments divided into three main groups to guide academic talent development. Since these methods are generalizable, the main groups are included. First, the target needs to be identified. Second, an intervention on modalities is necessary. Lastly, one needs to have realistic

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expectations and alternative life goals (Gagné, 2007). According to Gagné, development of entrepreneur talent is an “Extracurricular Activity” along with chess, astronomy and computers. Gagné divides activities into three major categories, of which Extracurricular Activity is one, and the others are Competitive Sports and Athletics, and Special Programs in the Arts.

In general, scholars agree that there are people who are more talented than others, and Drucker agrees with Gagné that talents often lie in well-defined areas (Drucker, 1998). However, along with experiences, problems are solved faster and more easily, because they are recognized as preliminary patterns, before they are manifested, similar to Herbert Simon’s chunks (Chase & Simon, 1973; Gobet & Simon, 1998; Simon & Newell, 1971; Simon & Chase, 1973; Simon, 1974; Simon et al., 1987). “Successful people know that anticipating barriers to goals increases the likelihood of success” (Siebert, 1996, p. 125).

In other words, with time previous problems will be considered possibilities, which have to be empirically verified in line with the statement of deliberate practice. Additionally, the time and environment aspect of the psychological variable wheel (see Figure 5) is supported.

3.2.5 THE ESSENTIAL FOUR PERSONALITY TRAITS, THEORETICALLY EXTRACTED

Instead of merely finding some general characteristics of an entrepreneur on which to conduct research, this research focuses on finding the specific characteristics which especially characterise entrepreneurs and not others. For example, if the entrepreneurial research only concerns the personality trait Risk Willingness, the outcome would also represent the characteristics of a leader since a leader is characterised by making decisions on the basis of incomplete information and thereby regularly take risks willingly.

As a consequence of finding characteristics specific to an entrepreneur, the minimum necessary to describe an entrepreneur is sought after. Thus, I argue for a bare minimum list of entirely distinct personality attributes which ensures discernment between potential entrepreneurs and someone who presumably never becomes an entrepreneur. Even though each single trait corresponds to individuals besides entrepreneurs, I seek a basic list that in a synergised scope relates only to entrepreneurs.

Consistent with the contention that the descriptions of the entrepreneur as an individual should be melded into an adequate terminology, the study operates in a psychological framing of psychological invariable personality traits. The selected personality traits include well-known traits as need for achievement, risk-taking, innovativeness, autonomy, locus of control and self-efficacy (Rauch & Frese, 2007a, p. 47 - 55). Inspired by the suggestions for research questions around the personality characteristics of entrepreneurs and the classic but controversial approach to the psychology of entrepreneurs (Rauch & Frese, 2000; 2006; 2007a), it was decided to question what can be learned from the original use of the concept of personality.

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Hence, the traits are picked based on careful theoretical considerations in a longer process of selection from the literature reviews in the economic tradition, psychological tradition and specifically in the study of development of personality tests and the concept of personality. These traits were then clustered and modified based on the terminology of the main concepts. The handling of traits in detail is based on more than thirty years of professional experience in the field of entrepreneurs and psychology.

When seeking the entrepreneurial personality, a definitional development based on personality traits occurs through the common agreement of entrepreneurship being a behavioural characteristic of an individual, arguments of entrepreneurship being a role of individuals who undertake to create organisations (Gartner, 1988), entrepreneurship being a certain phase of a lifespan or concerning a certain portion of the individual’s activities (Carree & Thurik, 2003), and entrepreneurship being neither an occupation nor a well-defined occupational class of individuals (Schumpeter, 1934, p. 78). Although being a workman is not a lasting condition, it is similar to the optimal conception of being an entrepreneur.

In accordance with the suggestions from the literature, the common denominator of entrepreneur definitions and the behavioural foundation of innovative activity, the minimal list of proposed essential traits to display solely an entrepreneur are Exploration Drive, Preparedness for Change, Self-preservation Instinct and Autonomy, outlined in Table 12.

| The four essential personality traits of an entrepreneur related to functional category and basic aptitude |
|---|
| <ul style="list-style-type: none"> 3 Innovation Potential <ul style="list-style-type: none"> 3.1 Growth <ul style="list-style-type: none"> 3.1.1 Exploration Drive 3.1.2 Preparedness for Change 3.2 Power <ul style="list-style-type: none"> 3.2.3 Self-preservation Instinct 4 Potential for Effectiveness <ul style="list-style-type: none"> 4.2 Integrity <ul style="list-style-type: none"> 4.2.3 Autonomy |

TABLE 12 THE SET OF FOUR ESSENTIAL PERSONALITY TRAITS OF AN ENTREPRENEUR

For information and according to the abductive method used, these traits have been further modified towards the empirically used personality test before this presentation to maintain the overview and to triangulate the proposal with empirical results. Thereby, the embeddedness in the factor categories Growth, Power and Integrity from Innovation Potential and Potential for Effectiveness will be further explained in section 4.5.1. Likewise, the search excluded traits from Leadership Potential to avoid the overlap diffusion that might be expected and focuses primarily on Innovation Potential, also explained further.

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This minimal list consists of four personality traits that ensure regularity and steadiness: Exploration Drive, Preparedness for Change, Self-preservation Instinct and Autonomy. Hence, the selection of the four personality traits is deemed to be sustainable as a measurement instrument for this research, and potentially the four personality traits may serve as a general minimum prerequisite for identification of entrepreneurs in the future. Accordingly, the essential traits developed theoretically are proposed to lie at the core of the entrepreneurial personality:

DEFINITION 2 OF THE THEORETICAL CORE PERSONALITY SET OF ENTREPRENEURS

The core personality of an entrepreneur from a theoretical perspective includes the set of personality traits Autonomy, Exploration Drive, Preparedness for Change, and Self-preservation Instinct, defined as follows:

Autonomy is the human capacity for self-motivation and being proactive in pursuing one's own goals.

Exploration Drive is the human need for sensory stimulation and active gathering of new knowledge and experience as a charging of personal resources.

Preparedness for Change is the human basic will to pursue better conditions for one's self and others with the readiness for behavioural change and overcoming of obstacles.

Self-preservation Instinct is a combination of the individual's basic survival instinct and will to live, independent of morale and group membership.

The core set of the entrepreneurial personality consisting of the personality traits Autonomy, Exploration Drive, Preparedness for Change, and Self-preservation Instinct outline the minimum personality characteristics that differentiate an entrepreneur.

Adding personality traits in general does not improve the identification of entrepreneurs in research, and thoughtless addition prevents finding anything due to blurred characteristics. However, additional specific traits to the conceptualization of the theoretical core entrepreneur explain either explicit kinds of entrepreneurs or different other innovative types, such as innovative creators and change managers.

Without doubt, the essential four personality traits extracted theoretically need to be confirmed through the empirical analysis. Thereby, the developed definition of the entrepreneur presumably will be strengthened.

3.3 REFLECTION ON THE LEADERSHIP OF ENTREPRENEURS

In traditional leadership research, the firm level is emphasised in proportion to the individual level. To that end, the leader personality has been investigated with preference for the antagonistic measurement style (Stewart & Roth, 2007) by historic

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reviews and outlines categorical pattern and models (Zaccaro, 2007) in mainly three categories (Derue et al., 2011): The first is demographic research with attention on gender effectiveness; the second, research on task competences as performance and execution (Bass & Bass, 2008), intelligence, conscientiousness and the traits openness to experience and emotional stability; and the third category is interpersonal attributes in social interactions including the traits extraversion and agreeableness (Hoffman, Woehr, Maldagen-Youngjohn, & Lyons, 2011).

Another line of categorization works with “Distal characteristics” that are dispositional and trait-like and “Proximal individual differences”, which are malleable or state-like such as knowledge and skills (Zaccaro, 2007). Moreover, Hoffman et al. (2011) examined leaders’ effectiveness according to the two categories and found that the distal individual differences, measured as achievement motivation, energy, dominance, honesty/integrity, self-confidence, creativity, and charisma, as well as the proximal individual differences of interpersonal skills, oral communication, written communication, management skills, problem-solving skills, and decision making, were strongly related. Thereby, the two categories had a similar relationship with effective leadership (Hoffman et al., 2011). Nevertheless, Zaccaro’s and Hoffman’s argument enhanced the development of a model to differ between psychological variables and invariables of the entrepreneurial personality (see Figure 5 and Figure 26).

Likewise, the theoretical term for both leadership and management, being multifaceted phenomena, has remained in Management Theory, despite Zaleznik’s suggestion to distinguish between leadership and management (1977; 1983). Unfortunately, these types of categorisation encounter the pitfall of mixed concepts and compare “apples to oranges”.

Overall, it must be expected that more leader traits will be added to the already known traits (Zaccaro, 2007; Zaccaro, Foti, & Kenny, 1991). Thus, Rauch and Frese found that the relationship is higher for business owners among these specific personality traits: need for achievement, risk taking, innovativeness, autonomy, locus of control, and self-efficacy, than compared to other populations, especially for the traits need for achievement, risk propensity, innovativeness, and internal locus of control (Collins, Hanges, & Locke, 2004; Rauch & Frese, 2007b (Submitted in 2005); Stewart & Roth, 2004). Additionally, the latter are related to business success (Rauch & Frese, 2007a, p. 53), which presumably matters to an entrepreneur.

The investigation of entrepreneur’s and leader’s traits benefits from enhanced research that clarifies the variables interfering with the personality attitudes. In general, the discussion is ongoing regarding the definitions of the entrepreneurial leader (Gupta et al., 2004), but the ability to learn from the intersection of leadership and entrepreneurship is of great value (Cogliser & Brigham, 2004). From a developmental perspective, it is interesting to follow a new concept of “Entrepreneurial leadership”, arising in the literature during the 1990s, that addresses the overlap between entrepreneurship and leadership. The intention is to impact the current academic discussion by consolidating the focus on core aspects of the overlap

between leadership and entrepreneurship, merged into the concept of an entrepreneurial leader in the next two subsections.

3.3.1 THE INTERSECTION OF LEADERSHIP AND ENTREPRENEURSHIP

Common knowledge supports the overlap between leadership and entrepreneurship in various subjects. In the early 20th century, entrepreneurs were viewed mostly from an economic perspective and not frequently distinguished from managers (e.g., Ely & Hess, 1937 (1893)) and with the integration of business, managerial, and personal terminology. Afterwards, the entrepreneur concept has evolved to include newness, creating, organizing, risk taking, and wealth added with multiple ventures over the duration of the entrepreneurial career (Ronstadt, 1989; Ronstadt & Robert, 1984).

Claudia C. Cogliser and Keith H. Brigham consider leadership to be a “mature field” in the words of Hunt and Dodge (2001¹⁶). They argue further that the path taken by leadership research can assist researchers of entrepreneurship in the struggle with issues associated with studying a field in its early stages and thereby scholars avoid the pitfalls experienced by those who studied leadership (Cogliser & Brigham, 2004). Moreover, the leadership literature outlines theoretical investigation on exploitative learning to maximize the empirical knowledge from research (Hughes, Hughes, & Morgan, 2007), which is useful in entrepreneur research as well. Even the definition of an entrepreneur seems to have substantial overlap with that of a leader (Cogliser & Brigham, 2004).

Even though Vecchio argues for profound parallels in entrepreneurship and leadership and suggests learning from comparison, previous investigations have focused primarily on either leadership or entrepreneurship (2003), such as Kets De Vries influential research through four decades in regard to the leader personality (Kets De Vries, 1996b; Kets De Vries, 1999; Kets De Vries & Florent-Treacy, 2002; Kets De Vries & Engellau, 2004; Kets De Vries, 2006; Kets De Vries, Korotov, & Florent-Treacy, 2007; Kets De Vries, 2009).

3.3.2 THE ENTREPRENEURIAL LEADER ROLE

The literature review reveals a specific relatively new concept of leadership, entrepreneurial leadership, where especially Gupta, McMillan and Surie have promoted the common knowledge of the phenomenon (Darling & Beebe, 2007; Gupta et al., 2004; Hejazi, Maleki, & Naeiji, 2012; Hmieleski & Ensley, 2007; McCarthy, Puffer, & Darda, 2010; Peck, 1991; Ruvio, Rosenblatt, & Hertz-Lazarowitz, 2010).

Entrepreneurial leadership is defined as “leadership that creates visionary scenarios that are used to assemble and mobilize a ‘supporting cast’ of participants who become committed by the vision to the discovery and exploitation of strategic value creation” (Gupta et al., 2004, p. 242). However, when their definition is broken down, each part makes sense in three directions. Thus, “mobilizing participants” could be described as the ability of an entrepreneur to communicate a goal as a common goal for future participants. Furthermore, “the vision become true” relies on how the entrepreneur

¹⁶ often cited as 2000.

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conducts the exploitation or prescribes how the participants need to act. Moreover, Gupta et al. only emphasise two interdependent challenges: forging a vision and building a cast of competent and committed supporters (Gupta et al., 2004, p. 242).

If part of the exploitation is similar to problem-solving, then the definition is consistent with the leadership theory of Johnsen (2002) concerning goal-setting, problem-solving and communication as the three pillars of leadership. Furthermore, a vision without a goal seems meaningless. The exploitation of competence and commitment requires communication and problem-solving among the supporters and in managing the supporters' skills towards the vision. In other words, the interdependence of the two challenges could as well be described as three interconnected parts of entrepreneurial leadership.

In the specific leadership role, the Entrepreneur, by Johnsen (2002), the behaviour focuses on developmental goal-setting with three objectives and problem-solving through a search-learning process. Furthermore, the entrepreneur is characterised by utilizing a decision-oriented language that takes place on several levels. The Entrepreneurial Leader Role is outlined in Table 13.

| The Entrepreneurial Leader Role according to Johnsen (2002) | |
|---|--|
| Leader behaviour | Objectives |
| Developmental goal-setting | Formulation of the objectives for the alteration process Generation of the resources required by the alteration process' required resources Development of the alteration process itself (Johnsen, 2002, p. 561) |
| Decision-oriented language | Individual In the immediate environment/surroundings Organisational |
| Search-learning process as a means of solving problems | A power base developed for decision making Specific development of projects and their courses based on a creative preliminary work and a detailed insight into the content of the project, financial and personal aspects, as well as The desire, courage and appreciation of personal and organisational learning (Johnsen, 2002, p. 563) |

TABLE 13 THE ENTREPRENEURIAL LEADER ROLE (JOHNSEN, 2002)

Due to the compatibility with leadership theories and perspectives addressing entrepreneurial leadership (Gupta et al., 2004), the leadership theory developed by Johnsen (2002) is further substantiated. Additionally, Johnsen's leadership theory is based on behaviour, creating the possibility of conducting a psychological analysis on an individual level of the empirical data on entrepreneurial leaders.

In line, Casson describes "the entrepreneurial firm as an opportunity-seeking information system, geared to identifying profit opportunities, based on solving other people's problems, and to setting up administrative systems to exploit these opportunities in an efficient way" (Casson, 2010, p. 269). In other words, Casson characterises a leader of an entrepreneurial firm as a problem-solver with a profit-

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opportunity goal. Additionally, the entrepreneurial leader must set up an internal system of opportunity exploitation within the entrepreneurial firm, a system of communication. Thus, for the objective of problem-solving, goal-setting and communication for the entrepreneurial leader; the leadership theory of Erik Johnsen (2002) matches completely.

However, Casson (2010) argues that being an entrepreneur is a result of a career path that includes leadership, where people has “spiralled upwards” till they have the relevant broad experience to solve high-level problems. According to Casson, the life cycle of a successful high-level problem-solver entrepreneur begins with a fairly routine functionally specialized employee role while learning the business as a young adult in the twenties, continues to a more responsible and innovative role in the thirties while having team-building experience, towards a leadership role in the forties and learning how to deal with an increasing number of subordinates and being a representative for the organisation in relation to other institutions. This role continues, according to Casson, until the executive role turns into a symbolic character in the sixties. Finally, the entrepreneur retires and functions in a consultative and counselling capacity as an “elder statesman” (2010, p. 268).

Hence, Casson argues for an employee role in the beginning, a middle-level or team leader position in the thirties and a combined leadership and entrepreneurship role in the forties. Moreover, only under exceptional circumstances is the entrepreneur’s responsibilities and career development also the biography of the firm.

In opposition, other scholars find the entrepreneurial leadership style to be an entrepreneurship strategy forced by environmental turbulence (Peterson & Berger, 1971).

However, in relation to my experiences of skilled entrepreneurs pursuing an innate desire of the “best kind of business” the contradictory statements of Casson will be further investigated empirically. In addition, the blind alleys at the individual level in the intersection of leadership and entrepreneurship (Vecchio, 2003), the self-employed entrepreneur (Casson, 2010), and finally the individual gap on the entrepreneurial leader (Cogliser & Brigham, 2004; Gupta et al., 2004), encourage me to follow the track of the entrepreneurial leader in the empirical investigation: “As a development project shifts borders and therefore is strategic in nature, the entrepreneur must master the strategic train of thought” (Johnsen, 2002, p. 561).

3.4 CONSIDERATIONS ABOUT ENTREPRENEUR MEASUREMENT

In general, the measurement method and the measurement tool with which the entrepreneur, the entrepreneurial leader and the personality are measured are challenged in relation to clarity and usability. However, the challenges of measurement methods also involve the instruments themselves and the way scholars are using them.

The process of qualified research requests that the measured entrepreneurs be differentiated from each other and their psychological translated behaviour mapped

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beforehand (Sarasvathy, 2003; 2008). Addressing the measurement, Davidsson needs selection mechanisms to differentiate between individuals, samples drawn from a general population, and discontinuity of vague research of personality traits primarily using questionnaires with paper-and-pencil reported behaviour instead of real-world behaviour, attitudes, intentions, goals or personality traits in a population of entrepreneurs (2005; 2007; 2008). In addition, the techniques are a critical point to be aware of in future investigations (Gartner et al., 1994; Gartner, 1988; 1990; Gartner & Shane, 1995; Gartner, 2007).

In the entrepreneurial literature, the research questions are often connected with how and why some people manage to start new ventures or invent new solutions. More specifically, they address how and why some people, but not others, recognize opportunities, decide to become entrepreneurs, exploit new opportunities and are successful (Baum et al., 2007). Research questions like these demand highly developed measurement methods and adequate measurement tools for the assignment. In addition, over time certain personal characteristics as risk-willingness might be overrepresented in researches. Moreover, measurement instruments must leave room for reactions that may be preferable due to contextual circumstances, for instance, if a desired job is not available for various reasons, then the individual is forced into another choice (Holland, 1966; 1997).

The lack of willingness to recognize a comprehensive and complicated knowledge may be detrimental to the development of more accurate, plausible, relevant and useful entrepreneurship scholarship (Gartner, 2007, p. 325) and he found that it was too easy to use “fabulous stuff” and lack the “critical eye” by using “theories that matter” with references to Karl E. Weick’s interpretations about learning backwards, but living forwards (1999). On the other hand, “if we are to successfully explain or predict entrepreneurial action and success with (distal) variables on the individual level, then entrepreneurship has to be assessed broadly on the individual level, and preferably over longer periods of time” (Davidsson, 2007, p. 295).

The American psychologist John William Atkinson (1923 –2003) and the Austrian economist Berthold Frank Hoselitz (1913 – 1995) argued in 1958 about the importance of distinction in measurements in order to fully understand the personality characteristics of individuals who perform in entrepreneurial functions. According to Atkinson and Hoselitz, the studies ought to distinguish between entrepreneurs in different types of occupations and in different firm sizes, when the relation between personality traits and an entrepreneur is explored (1963). Unfortunately, they changed their objective for study through the article from entrepreneurial behaviour connected to the personality and the personality traits to three basic motives that they have measured in previous research.

Nevertheless, their theoretical argumentation through three descriptions of the entrepreneurial function by Say, Knight and Schumpeter is convincing in the point of the need for distinction in measurement. The need for an accurate description of the entrepreneurial role is essential. “These reflections appear to indicate a series of important conditions for the design of a research project in the interrelations between

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an entrepreneur and personality” (Atkinson & Hoselitz, 1963, p. 108). Furthermore, they propose to enhance the knowledge of what to look for in both the selection and the training of persons, who are destined to occupy roles of business leadership.

In general, researchers who deal with observing, measuring, interpreting, learning, and teaching issues of human beings have an integrated dilemma, because researchers never know for sure what to look for and how to capture the essence of this fine texture of human nature. Change will presumably occur in the future due to enhanced equipment to measure the functions of the brain.

Hence, the crucial issue of measuring an entrepreneur and more specifically the entrepreneurial personality concerns the cohort, the measurement preconditions and the limitations of instruments. The latter two, along with the advantages of a full personality profile, is further processed below.

3.4.1 THE TIMING AS AN EXAMPLE OF MEASUREMENT PRECONDITIONS

The notion is that any time is the right time to measure the entrepreneurial personality. However, the surveyor’s knowledge on what to measure is crucial, as the core invariable part of the personality separates from the outer variables of the personality.

The ancient physician, Hippocrates (ca. 460 BC – ca. 370 BC) considers a crisis as a crucial moment after which the patient either recovers or dies. In that light, a crisis is crucial for development. Individuals were characterised as either choleric, melancholic, sanguine or phlegmatic according to the four humours without any changes before, during and after the crisis. In an updated version, the Swedish psychiatrist Johan Cullberg defines a crisis as a situation where the individual momentarily lacks adequate knowledge and strength to overcome the odds. Cullberg operates with four phases¹⁷ in a crisis which apply equally to everyone (1975).

On a small scale, this corresponds to entrepreneurs who almost attract crises by their entrepreneurial habits: They search for new fields, where they by nature lack adequate knowledge and must obtain new knowledge quickly and transfer knowledge from other fields to cope with the situation. Consequently, entrepreneurs have a lot of strength, according to the definition of Cullberg. Along these lines, the American psychologist Lawrence Albert “Al” Siebert (1934 – 2009) found common characteristics among the survivors from deathly accidents and disasters in his 40

¹⁷ Cullberg’s phases in short: The first is the Chock Phase with duration of a few minutes till a few days. The purpose of the chock phase is to protect the mind against overwhelming material. The second phase is the Reaction Phase while lasts from a few days to some months. In this phase, the person discovers the new reality and mainly cries and becomes angry. The third phase is the Repair Phase, lasting months up to a year. In this phase, the person tries to understand and adapt to the new reality. Often, the person needs guidance and takes advantage of broadly knowledgeable relations. The last phase is the New Orientation Phase, which continues for rest of life. In this phase, the person changes their patterns, achieves new habits and becomes vivid again. Thereby, the person develops a better insight and enhances their strength.

years of research. As an example, Siebert describes how the survivors possess a proactive coping pattern (1996), which seems similar in the majority of entrepreneurs.

Hence, the entrepreneurial behaviour is appropriate for coping with crisis situations, and the entrepreneur behaves equally entrepreneurially during crisis, bankrupt, and success, in periods of employment, unemployment and self-employment and likewise in childhood and old age.

Additionally, future measurement instruments are suggested to be developed into contemporary, adequate, valid and reliable tools. In the meantime, the considerations need to focus on the substance of the entrepreneurial personality.

3.4.2 THE LIMITATIONS OF PERSONALITY TESTS

Rauch & Frese (2007a) implied that personality theories develop in different directions, for example, with references to either Freud or Jung. In the case of the theory of personality in vocational life, there has been a divide between Cattell's 16PF and Costa and McCrae's Five Factor Theory; however, they have moved towards each other over time. Hence, personality tests correspond with the paradigmatic embedded perception. In order to highlight some of the pitfalls of personality tests, examples are provided of personality test constructs, followed by their limitations in this section.

In the 16PF theory, Cattell distinguishes between profound traits, being the building blocks of personality, and superficial traits. Typical in-depth traits are the tendency to dominate versus becoming submissive, and dependency on others versus being autonomous (Pervin & John, 2001). Cattell developed his personality test over 50 years through factor analysis on more than 18,000 adjectives describing personality and identified 16 basic personality traits. The 16PF is recognised as one of the leading scientific methods to map personality and the 16 personality factors are arranged as 16 pairs of contradictions, with a scaled measurement between the pairs' two diametric opposites.

The pitfall of Cattell's test is connected to the antagonistic test-design, thus Davidsson (2007) argues for a behavioural aggregate of entrepreneurial activity as an alternative to the dichotomous outcome variable of entrepreneurial status. The entrepreneur has an ability to accommodate the full palette between the personality factor-pairs. For instance, entrepreneurs perceive arguments and opposite arguments simultaneously in order to prosper and use the full span of dichotomy in a given situation to act more effectively due to an ability called "the tendency to split" (Kets de Vries, 2009) or "paradox elasticity" (Siebert, 1996; Østergaard, 2003). The ability derives from a basic biphasic personality trait that allows an individual to escape from fear and move towards food or reproduction (Siebert, 1996). In line, Erwin Kauffman's recipe for successful leaders is to work hard and have fun; while John Eggers and Raymond Smilor point out that entrepreneurs must manage paradoxically and create change (In Smilor & Sexton, 1996).

The five factor theory by Costa and McCrae suggest five big factors, viewed as traits, which are divided into six sub-factors (McCrae & John, 1992). The five personality dimensions are: Openness to experience, Conscientiousness, Extraversion,

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Agreeableness, and Neuroticism (OCEAN). The Big Five, measured by the revised NEO Personality Inventory (NEO-PI-R), has increased in influence due to an internationally academic acceptance as the gold standard. As the Big Five model overlaps with Cattell's 16 Personality Factors, it is reasonable to conclude that the human personality is intimately linked with five superior personality trait-spans with subcategories. The five factor model uses a scale ranging from low to high on five factors, but at the same time these endpoints are partly described as contradictions. The Big Five is primarily measured by a self-assessment questionnaire with 60 items, the NEO PI-R (Neuroticism Extroversion Openness – Personality Inventory-Revised); whereas the original test from 1978, the NEO-I (NEO Inventory) had 240 items and also combined self-report with observations.

One limitation of the Big Five is the use of self-report and the risk of predictable answers due to the test is publicly available online. Moreover, there is a rule of thumb in personality tests that more than 10 questions (items) should point towards each trait to ensure in-depth validation. For instance, a question about outdoor activities is primarily answered with a current environmentally related opinion, which does not include other seasons, the childhood or an optimal environmentally related answer. Hence, the validation of the 60-item version does not automatically convey in-depth personality traits, since the first version consisted of test scoring, self-scoring and interviewing. Empirical research requires validity amendments in an abbreviated Basic and Earning Self-Esteem Scale instead of relying at the original longer version (Dåderman & Basinska, 2013).

In fact, due to the continuous work with validation of the Five-Factor model, the largest obstacle is not the Five-Factor model in any of the many editions presented in more than 100 articles during the last years (e.g., Costa & McCrae, 2008; Costa & McCrae, 2010; McCrae & Costa, 1987; McCrae, 1992; McCrae & Costa, 2008; McCrae et al., 2008; McCrae et al., 2010; McCrae, Kurtz, Yamagata, & Terracciano, 2011; McCrae, 2013). On the contrary, the obstacle is related to the amount of self-reported Big Five scores in articles, which rely on previous validation of the original test, and thereby pushes endless invalidated data into the academic discussion. For information, Boyle's article is a massive critique with references from the literature regarding almost every critical point of the Five-Factor model (Boyle, 2008).

As the last example, Holland developed a personality test related to vocational choice. He found six personality types, some with much in common and others differing more from each other. Holland developed a hexagonal classification model, where people place themselves according to the content of each of the six types. The hexagonal model is very well-tested empirically (Holland, 1966; 1997). Theoretically, Holland's model and thoughts about the congruence between personality and vocational choice seems to be tenable (Spokane, 1985). Holland's work speaks in favour of a psychological invariable that implies the selection of specific jobs and education. Moreover, the results from Holland's Hexagonal Model (RIASEC-model) indicate that the invariable part of the personality, called traits, must be stable to a certain point.

It remains uncertain as to whether Holland's Hexagonal Model (RIASEC-model) has been used outside vocational choices, which is a drawback in itself.

Generally, an individual's personality consists of a structure with innate personal elements, including, for example, inheritable talents for math or music, and a process where incidents affect the person over time and to different degrees, as through culture (Hofstede & McCrae, 2004; Shane, 1993). Ideally, a measurement should emphasise these elements along with the unconscious and in terms of avoiding measurement pitfalls, the above mentioned failures should be emphasised along with the precondition components regarding the actual concept and the instruments of measurement.

3.4.3 THE ADVANTAGE OF PRIOR FULL PERSONALITY PROFILE

In general, the personality test and the theoretical development of the test are seen as an acceptable framework in which the individual's personality is embedded, for instance Cattell's 16 PF (Pervin & John, 2001), Costa and McCrae's Big Five factors (e.g., Costa & McCrae, 1992; McCrae & Costa Jr., 1999), and Holland's hexagonal model RIASEC (Holland, 1966; Holland, 1997). Concurrently, the personality test is the measurement tool from which one is able to describe the personality.

Accordingly, the measurement of the entrepreneurial personality is challenged twofold: first by the double role of personality tests and second to find and select the precise personality traits which can be determined to be valid and reliable. The double role may rest for now, but the selection challenge is crucial in relation to the entrepreneurial personality as further discussed below. Thus, the measurement of the personality of entrepreneurs is in many ways trapped in a crossfire. The arguments for finding the entrepreneurial "DNA" speak in favour of measuring the essential entrepreneurial traits, but they often fail due to fuzzy definitions.

Arguments for measuring the full personality profile in order to distinguish between the relevant traits become relevant in every sense. However, scholars are very mixed in every sense in this regard.

Valencia-deLara and Araque-Hontangas see personality characteristics and entrepreneurs' attitudes to be considered as complementary, not opposites; contributing to a more generally predicted behaviour allowing normal and stable subjects to have both circumstantial and temporal behaviour (2012, p. 352). In addition, attitudes or general characteristics are found to be changeable when adapting to circumstances (McCline, Bhat, & Baj, 2000; Robinson, Stimpson, Huefner, & Hunt, 1991).

Hence, I argue for a distinction between personality traits and common characteristics due to the consideration of stable traits preserved under any circumstances throughout life, and thereby avoid a disturbance of the perception of the entrepreneurial personality. As examples, scholars argue without consideration of a differentiation between stable traits and changeable characteristics such as competences, motives and skills, which should rather be considered as changeable psychological variables.

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McClelland (1987) identified the competencies that distinguish successful from less successful entrepreneurs: assertiveness, commitment to work, efficiency orientation, initiative, and systematic planning. However, McClelland (1987) states concurrently that entrepreneurial competencies change over the business life cycle and are difficult to establish and measure given the incomplete understanding.

According to Baron and Markman (2000), social competencies, including social adaptability, social perception, impression management, and persuasion and influence are important, where Mischel (1990) inclines towards the view that the social factors matter most according to people's behaviour. Moreover, Markman (2007) argues for analysis of knowledge, skills, and abilities (KSAs) in entrepreneurship by psychologists using a prior job analysis to decipher the tasks, including start-up performance and successful leadership (Markman, 2007).

Relatedly, Busenitz and Arthurs (2007) found that entrepreneurs often lack the managerial and technical skills needed for developing an organisation, whereas Baum, Locke, and Smith (2001) found technical skills of owner-managers to be well-developed. Moreover, entrepreneurs are multi-skilled, and behaviourally specific skills or competencies can be exploited and leveraged as invisible assets (Markman, 2007). Adding to the existing confusion, new perspectives and suggestions for the academic discussion interfere along the way, such as intention as the best predictor of behaviour (Krueger Jr., Reilly, & Carsrud, 2000; Valencia-deLara & Araque-Hontangas, 2012).

The arguments have good points, but they lack a prerequisite differentiation. Hereby, the above-mentioned examples argue indirectly for measurement of the full personality profile in order to distinguish the important consistent traits from the ordinary traits and from ordinary descriptive and changeable variables in relation to the entrepreneurial personality.

Thus, Hisrich et al. state that a comprehensive taxonomy of entrepreneurial tasks will allow researchers to better test and apply entrepreneur theory by enabling interstudy comparison (2007, p. 584-585). Rauch and Frese (2006) state in regard to the personality approach to entrepreneurs' that the effect of personality traits is not direct and the effect depends on more than one or two traits through the use of questionnaires (Davidsson, 2005; 2008). Additionally, Van der Loos, Koellinger, Groenen and Thurik (2010) suggest collecting extraordinary knowledge from the genetic research field instead of surveys on elements that are visible and obvious for everyone.

Contrary to the claim regarding the empirical dearth of research on personality traits due to small correlations between traits and entrepreneurial behaviour (Aldrich, 1999) supported by Low and McMillan's narrative reviews and others (Brockhaus & Horwitz, 1986; Gartner, 1988; Low & MacMillan, 1988), then James W. Carland, Frank Hoy and Jo Ann C. Carland¹⁸ appreciate Gartner's question while they suggest

¹⁸ The citations are derived from page 37. These three authors published the article in 1988 in *American Journal of Small Business* 12(4) (1988):33-39, and in a different succession as Carland, Jo Ann C. Carland, James W., and Hoy, Frank. "Who is an Entrepreneur?" was a

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continuing the debate, adding: “Should we discontinue the study of entrepreneurs because they are all different?” “Are certain traits unusually recurrent? Do some differentiate the owners of the innovative, growth-oriented firms from others?” (Carland, Carland, & Hoy, 2002). Moreover, Rauch & Frese found that business owners’ personality traits were positively related to business creation and business success; the relationship is moderate, but about the same size as the correlation between personality traits and leadership, and also personality and performance in general (2007b, p. 369). Generally, the interest in finding specific entrepreneurial traits is tremendous. However, finding the correct traits is a difficult task.

Rauch and Frese (2007b) found a new pattern of personality traits matching entrepreneurs in a meta-analysis: self-efficacy, proactive personality, tenacity, need for achievement, stress tolerance, goal orientation, need for autonomy, innovativeness, endurance, flexibility and passion for work.

The meta-analysis was drawn from 116 independent samples from 104 different articles, of which 54 studies tested relationships between owners’ traits and business success. Twenty-seven studies came from sources other than peer-reviewed journals. They made a search in seven databases, some conference proceedings and six journals: *Journal of Applied Psychology*, *Academy of Management Journal*, *Administrative Science Quarterly*, *Journal of Small Business Management and Journal of Business Venturing* (1985-2006). Moreover, they specifically excluded single item measures of owners’ traits because of unreliability. An expert panel rated 11 traits out of 51 traits as entrepreneur-related, whereas “tenacity” and “passion for work” had not been studied frequently enough to be included in separate meta-analyses for entrepreneurs’ task-related personality traits. As an example, “proactive personality” has been studied 5 times, and “need for achievement” 31 times in relation to success. Conversely, frequently used traits in the literature such as “internal locus of control” and “risk taking” were not included in one table, but in others causing a disagreement of relevance in the expert panel.

Unfortunately, this distinguished analysis is drawn from previous insufficient measurements, according to prior measurement considerations and subjective ratings from an expert panel.

In conclusion, the notion is that academia will benefit from full profile measurement in order to outline the diversity of the different types of entrepreneurs and their associated personality profiles. Afterwards, a factor analysis of selected cohorts’ full personality profiles might produce relevant single personality traits to continue exploring. Efforts on single trait analytical testing are pointless without the prerequisite differentiating of entrepreneurs.

Question Worth Asking (1988) in University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship. Available at SSRN: <http://ssrn.com/abstract=1504446>. However, the reference mentioned in the text is the same article and highly cited.

3.4.4 MEASUREMENT PREDISPOSITIONS AS RESULT OF REFLECTIONS

Generally self-report and empirical research from register data turn out to be insignificant in predicting an entrepreneur’s potential for success (Gartner, 1988; Stogdill, 1950). In this manner, there has been a historic adding fuel to the fire by not delving into the entrepreneurial personality and the leadership personality regardless of McClelland’s findings (McClelland, 1987), and despite Costa and McCrae’s continuous development of their personality structure theory (Costa Jr & McCrae, 1990; McCrae & John, 1992; McCrae & Costa Jr, 1997; 1999). Currently, the findings still lack distinct coherence at the individual level (e.g., Davidsson, 2007).

A model was developed incorporating the measurement challenges that occur during the research process.

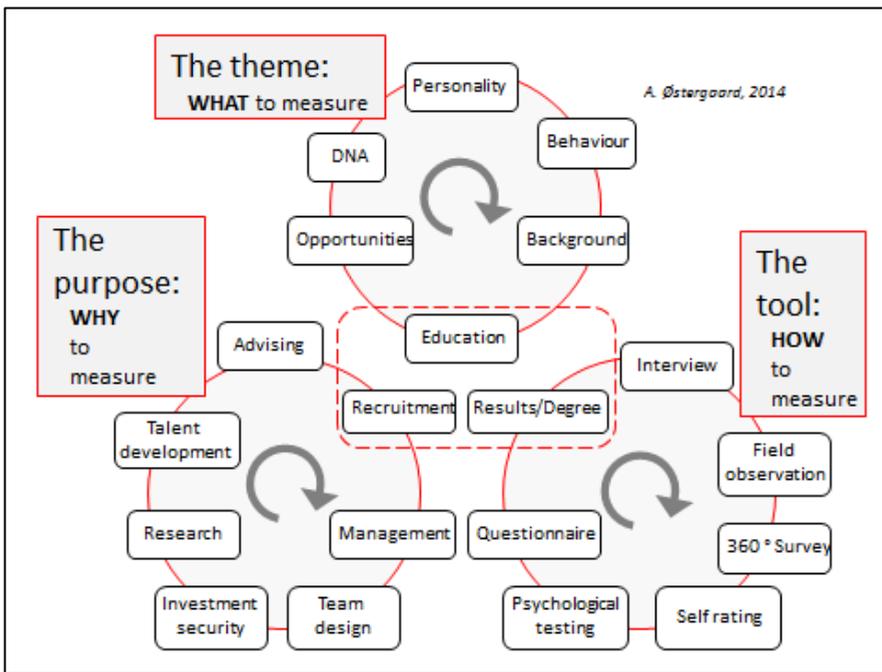


FIGURE 6 MODEL OF PRECONDITIONS BEFORE MEASUREMENT

Thus, the developed model (see Figure 6) outlines the preconditions of any measurement on individuals first through the measurement design, where one has to reflect on why the measurement is necessary or wanted. Instead of relying of what accessible databases might reveal interesting data, a measurement should be conducted to address a scientific unsolved need, suitable recruitment, or investment security. Secondly, there is the consideration as to what to measure, for instance the personality, behaviour, background of applicants, their education, or DNA to assure the stability of qualities such as skills. Lastly, the decision of how to obtain valid and reliable measurements affects the research results. For instance, measurement of talent

development using only subjective self-scoring rarely leads the athlete to the Olympic Games. Thus, those conducting measurements need to evaluate what type of measurement is the most workable for the purposes, for instance, self-rating or psychological testing. As an example within a broken line, the model uses the why consideration of recruitment of a new employee. The consideration continues with what to measure in finding the right candidate, which is exemplified by education, and then the how is solved by the educational degrees. At this point, the precondition before measurement is ideally fulfilled, if the sub-questions have been delineated, such as the grades of an educational degree versus a specific course, a specific university, or a university in a specific country, or perhaps the diversity or amount of education.

In order to set a precedent for measurement in research of the entrepreneurial personality, it is necessary to consider who to measure and when to measure according to, for example, the age of the enterprise and the moment of success or failure. Finally, the combination of why, what, and how is used to accurately capture the entire subject.

3.5 THE RESEARCH QUESTION AND EMPIRICALLY CONSIDERATIONS

Based on the model of preconditions before measurement (see Figure 6), the considerations of measuring in this research is critical. Hence, in the preparation phase the question of why to measure is answered with the purpose of research. The theme to measure would primarily be the personality of entrepreneurs, however, the personality is also the topic of research, why a measurement must be open for an explorative search and unexpected findings related to an appropriate method. Last, the instruments of measurement have to be decided. First, the basic elements to evaluate related to personality are personality traits, which are measured by a personality test.

In addition, the literature review outlines a presumably connection between entrepreneurial activity and leadership behaviour, why leadership behaviour is an evident secondary measurement option. The literature review also provides evidence for not only relying on simple self-score measurement, but suggest to include several and diverse measurement methods to enhance the quality. Hence, two diverse tests and a supplement with interview or a comprehensive questionnaire with open-ended questions would be preferable.

Consequently, a standardised personality test and a thoroughly tested leadership preference test was chosen that already have proven valid and reliable results that met national standards of equipment specifications. Thereby, the secondary leadership behaviour data has a potential of underlining the measured personality data by triangulation and double verification. Additionally, interviews are preferable in qualitative research purposes with for instance nine individuals, but in purpose of collecting data from at least fifty entrepreneurs, a well-designed questionnaire is preferable. Then, the considerations of the contents of the questionnaire must be suitable in relation to the research question.

CHAPTER 3. Conceptualization

The main research question suggested previously proved relevance based on the literature review and again after the conceptualization. Hence, the research question is:

How is the entrepreneurial personality constituted?

However, in order to investigate how an entrepreneurial personality is constituted, the profound essence of the entrepreneur must be divided into tangible elements. Simultaneously, the intention of the explorative research is to find patterns by investigating the entire personality and thereby outline types of entrepreneurs. According to the literature review, the core of the entrepreneurial personality needs to be investigated from a psychological perspective as a fundamental starting point and a first sub-question that has a potential to accomplish such a task is quite simply:

What is the psychological core of the entrepreneurial personality?

Secondly, the literature review treats the innate abilities in opposition to influences from the environment and relations in becoming an entrepreneur. Hence, the impact from both sides is relevant to investigate. However, an investigation of the nature – nurture balance is limited by no accessibility to genetic measurements. An investigation by interviewing entrepreneurs, their parents and eventual children and other relatives would be preferable, but is heavily time-consuming and not an option in this research. Hence, a study of the entrepreneurial practice will be conducted through the questionnaire, based on this second sub-question:

How do nature and nurture interact shaping the entrepreneurial personality?

Thirdly, the potentially intertwined relation of the process of entrepreneurship and leadership turns out through the literature review to be highly relevant. An investigation of the entrepreneurial personality must include the relevance of leadership besides the mapping of the specific factors of importance for future understanding of the entrepreneur. In addition, the concept of entrepreneurial leader should be pursued further. A third sub-question to deal with the knowledge retrieved and to be revealed from this relationship is:

What is the relationship between leadership and entrepreneurial personality?

Conclusively, this research deals with theoretical verifications and developments concurrently with empirical explorations, verifications and analyses in regard to the literature review and the conceptualization outlined in this chapter.

Theoretically, the research must continue developing, first, the combination of the presented models, the entrepreneurial action-characteristic model (see figure 4) and the psychological variable wheel (see figure 5), would be valuable, especially if the relevant entrepreneurial personality traits were integrated in a final model. Second, regarding categorisation, the literature review dealt with a diffusion among entrepreneurial types, why a distinct categorisation that differentiate between the entrepreneurial types is preferable.

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Empirically, the key research question with the three sub-questions are pursued in accordance with measurement considerations, and the theoretical findings are attempted verified by two tests and a questionnaire. The questionnaire is available in Appendix 1.

In the next chapter, the scientific philosophy and the corresponding methodology that is most suitable for this research are examined. In addition, the target of measurement, the entrepreneurs, is described together with the measurement instruments.

CHAPTER 4. METHODOLOGY

“To Dare Is to Lose One's Footing Momentarily. Not to Dare Is to Lose Oneself.”

Søren A. Kierkegaard

In this chapter, the philosophy of science underlying the setting of the research is presented. Even though methodology and scientific theory is usable across the theoretically dividing lines, they should be considered as belonging together as a foundation of the scientific research. Hence, the purpose of the chapter is to present the theoretical reflections in relation to the science of philosophy, the chosen methods, and the underlying reasons. This entails the handling of the survey design, the measurement instruments, the challenges of measuring a concept and a multi-defined subject.

4.1 PHILOSOPHY OF SCIENCE

Ward, Vertue, & Haig (1999) explain how theories are launched:

“The importance of data lies in the fact that they serve as evidence for the phenomena under investigation. In extracting phenomena from the data, we often engage in data reduction using statistical methods. Generally speaking, these methods are of direct help in the detection of phenomena, but not in the explanation of explanatory theories. It is important to realise that the reliability of data forms the basis for claiming that phenomena exist. In establishing that data provide reliable evidence for the existence of phenomena, we control variously for confounding factors (experimentally and statistically), use standardised measures, carry out replications, calibrate instruments, and perform statistical analyses for data-reduction purposes. While reliability is the basis for justifying claims about phenomena, we will see later that judgments about explanatory coherence are the appropriate grounds for determining theory acceptance. With the successful detection of one or more phenomena, there is a natural press to generate theories that plausibly explain the phenomena.” (1999, p. 62)

In purpose of introducing a new discourse as Gartner and Stogdill with a renewed theory of entrepreneurs, the explorative approach is most appropriate and the abductive method is efficient in accumulating new knowledge into new paradigms:

“The abductive method takes the systematic evaluation of mature theories to be essentially a matter of inference to the best explanation, where a theory is accepted when it is judged to provide a better explanation of the evidence than its rivals. Finally, explanations are judged more coherent if they are supported by analogy to theories that scientists already find credible. The theory of explanatory coherence, then, offers the researcher an integrated

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account of many of the relevant criteria deemed important for the appraisal of explanatory theories.” (Ward et al., 1999, p. 50)

This scientific project is based on obtaining new insight into an entrepreneur from the core of the entrepreneurial personality. Consequently, the scientific philosophy and the method must be in tune with the circumstances of such a research.

Generally, the Paradigm is the world view formulated by ultimate assumptions, the Ontology is the object to investigate, where the aim is to define what to be investigated and how it should be understood; and the Epistemology is the method of investigating, for instance with an analytical approach as opposed to systematically by investigating each subsystems towards a general conclusion. The adequate paradigm, ontology and epistemology for this research is outlined below.

4.1.1 THE PARADIGM

A paradigm is a set of assumptions, a collection of ideas, concepts, values, techniques, and the like that constitutes the view of reality for the members of a given scientific community, especially in an intellectual discipline (Kuhn, 2012 (1962)). According to Kuhn only three types of problems address normal science: determination of significant facts; matching of facts with theory; and articulation of theory. Thereby, the purpose of normal science is not to challenge the paradigm but to maintain and develop the paradigm through expansion towards others and new research fields. Kuhn described in 1970 a quite disturbing doctrine for that time:

“The most striking feature of the normal research problems we have just encountered is how little they aim to produce major novelties, conceptual or phenomenal. Sometimes, as in wave-length measurement, everything but the most esoteric detail of the result is known in advance, and the typical latitude of expectation is only somewhat wider.” (Kuhn, 2012 (1962), In Chapter IV, Normal Science as Puzzle-solving, p. 35)

Kuhn’s thoughts about paradigm were based on natural science, and one of Kuhn’s few examples of developments is about Copernicus and his documentation of the sun as the natural centre of the universe. Naturally these thoughts of paradigms were criticized (e.g., Popper, 1970). Nonetheless, Kuhn launches the idea of paradigms in science along with discussion on how to explain the truth.

In a broad sense, the Austrian philosopher and scientist Karl Popper (1902-1994) see science as cumulative, which means that we all become wiser due to new research. Popper argued that scientists, by means of valuing their hypotheses as truth or false, could approach the reality and thereby become able to judge which statements are scientific and which are pseudoscientific (1972; 2005). However, the American historian of science Thomas Kuhn (1922-1996) argued that science is not cumulative but rather shifts between different sets of rules for scientific knowledge, and he then launched the concept of research paradigms (1962).

The utility of paradigms is primarily the understanding that dominating scientific theoretical approaches restrict competing theoretical approaches with another view of

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science and the world. Paradigms not only are discussed normatively to determine what science is and how to act in ways that are scientifically correct, but paradigms are also a historical changeable phenomenon with the norms and values of the current framing. Additionally, the concept of paradigms shows that science builds on consensus among peers and not necessarily on a strict universal set of rules. “Anything goes” (Feyerabend, 1975).

The first and most dominating position in the philosophy of science is Positivism, which is thereby the most amended by ongoing theorists. For instance, within the social sciences, Guba and Lincoln (1994) mention four paradigms in relation to qualitative methods: Positivism, Post-positivism, Critical Theory, and Constructivism. Likewise, Creswell relates research design and methodology towards the paradigms (2013).

However, the distinction is seen according to the purpose (the overall realisation interest), the ontology (the basic approach of the social world nature perspective), view of human nature, epistemology (the nature of knowledge and how we know and eventually produce knowledge), and finally to the concept of truth. In this context, the paradigms to differentiate between are Logical positivism, Critical rationalism, Hermeneutic, Phenomenology, Structuralism, Critical realism, Social constructivism, Discourse analysis, Pragmatism, and Actor-network theory, where positivism includes both Logical positivism and Critical rationalism (Egholm, 2014).

Logical Positivism was propounded by the Vienna Circle consisting of Moritz Schlick (1882-1936), Rudolf Carnap (1891-1970) and Otto Neurath (1882-1945), among others, in the late 1920s and increasingly criticized in the 1960s by thinkers such as Karl Popper and Thomas Kuhn.

In general, the positivists are characterised by utilitarianism and investigating in causality with eventual prediction therefrom. Moreover, the ontology of positivism is realistic and the essence of phenomena are considered universal. Knowledge is obtained on the basis of objective and empirical observations originating from Aristotle. Later positivism was developed against religious dogma and towards human sense by writers such as Thomas Hobbes (1588-1679), John Locke (1632-1704) and David Hume (1711-1776). In 1651 in his book *Leviathan*, Hobbes considers morale and ethic as conventions that can be studied empirical (e.g., in: Hobbes & Curley, 1994; Lichbach, 1998; Parkin, 2007). Locke suggests in “An Essay Concerning Human Understanding” from 1689 to hold sensory experiences as the basis for realisation (e.g., in: Locke & von Leyden, 2002; Locke, 2012), and Hume stated in “A Treatise of Human Nature” from 1739-1740 that it not is possible to argue scientifically unless it can be verified empirically (Hume, 2012). In positivism, human beings are regarded as utilitarian, rational creatures and investigations are based on individual reduction; however, the logical positivism brings in the methodological reduction from the French sociologist David Émile Durkheim (1858-1917).

The differentiation between logical positivism and critical rationalism appears in the epistemology. Hence, knowledge is obtained posteriori through an inductive approach

to verify and understand nomothetic and objective in the logical positivism. In critical rationalism, knowledge is obtained a priori through a deductive approach to be falsified and understood nomothetically and objectively. Furthermore, according to the German sociologist Jürgen Habermas (1929-) the theory of knowledge, the epistemology, is technical with a nomothetic purpose (Habermas, 1968). In fact, Durkheim's concern was to establish sociology as a science (Durkheim & Mauss, 1963; Durkheim, 2013), and the work of Habermas focus on the foundations of a social theory and the epistemology.

The German philosopher Wilhelm Dilthey (1833-1911) claimed that natural science and human science study radically different areas and thereby should be studied differently. The non-human and the human had to be investigated differently; scientists of natural science should *explain* their object and scientists of humanities should *understand* their object (Egholm, 2014; Smith, 2006). The dualistic distribution of natural science and human science leads to different types of assumptions. Likewise, the methodological division divides methods into quantitative and qualitative with respectively “hard” evidence to be replicated by other scientists, and more “soft” interpreted material to be recognized by other scientists (Smith, 2006).

4.1.2 THE ONTOLOGY

In purpose of investigate an object as the entrepreneurial personality, the Ontology is essential due to the aim of defining what actually should be investigated and how it should be understood. Thereby, the ontology is clearly linked to the overall subject area and epistemological theory. In general, the best suitable scientific philosophy (Logical Positivism) functions as the point of departure for the entire study from which the method (Abduction) is selected and further validated through theoretical arguments.

“One of the main ontological distinctions is between realism and constructivism” (Egholm, 2014, p. 25) that considers the role of human consciousness and cognition. Thus, this research seeks to understand and explain the entrepreneurial personality mainly in line with ontological realism. Another ontological distinction is materialism versus idealism concerning the elements that forms our explanatory framework. Even though a business launch could be explained by the product developed, then the thoughts, ideas, and the intellectual dimension in line with Plato, a Greek philosopher (427-347 BC) explain better the entrepreneurial personality. Last, besides the ontological distinction between the real and the hypothetical, the question is whether to perceive the phenomena as universal, contextual or processual (Egholm, 2014).

The personality of a human being should preferable be universal, likewise of an entrepreneur, but cultural and contextual impact is inevitable, and new opportunities appear and disappear during a lifespan. Hence, the notion is that an entrepreneurial personality is universal due to innate predispositions, however, with contextual and processual influences. Thus, the purpose of this research is among others to investigate the significance and to which extend the personality is influenced.

4.1.3 THE EPISTEMOLOGY

In relation to the epistemology, the method of investigation, primarily obtained posteriori through a questionnaire, is affiliated with the paradigms Logical positivism, Phenomenology, and Pragmatism (Egholm, 2014). Furthermore, the purpose of the scientific research is to understand nomothetically and as objectively as possible. Nomothetic means that the phenomenon is analysed in order to establish general laws or lawfulness of the nature of the phenomenon. The nomothetic approach is congruent with the epistemology of the following paradigms: Logical positivism, Critical rationalism, Structuralism, and Critical realism (Egholm, 2014).

Regarding psychology, parallels exist between the scientific method and psychological assessment and the abductive theory of method is a useful framework for highlighting and integrating the major phases of psychological assessment (Ward & Haig, 1997). Later, Ward and Haig, together with Vertue (1999), presented a general theory of scientific method to illuminate that psychological assessment is a form of systematic scientific inquiry. The general psychological method provides a conceptual framework for identifying and structuring various basic assessment tasks ranging from phenomena detection through evaluation of a case formulation. However, they emphasise that the theory of method concerns the detection of phenomena and their explanation.

Furthermore, the abductive inference involves reasoning from a presumed effect, called the phenomenon, to its explanation in terms of an underlying causal mechanism, called the theory (Ward et al., 1999). Haig (2005) sketched the abductive theory as a broad theory of scientific method to assemble a complex of specific strategies and methods used in the detection of empirical phenomena and the subsequent construction of explanatory theories with a particular relevance for the behavioural sciences.

In addition, Robson (2011) explained that realists usually use the form of logic known as abductive (or retroductive) reasoning (Peirce, 1986), which particularly appears to suit research in these circumstances. The advance seen in the abductive method is that, in contrast to the movement from theory to observations as in deduction, or from observations to theory as in induction, the abductive process cycles between the two (Robson, 2011).

According to Ward, Vertue and Haig (1999) and Haig (2005), the scientific abductive method:

- is a genuine commitment to the idea that the formulation of problems is of central importance to scientific research.
- adopts a view of problems known as the constraint-composition theory. On this formulation, the constraints are actually constitutive of the problem itself; they characterise the problem and give it structure (Haig, 1987; Nickles, 1981).

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- demands explicitly that the solution arises from the goals of the research program, and pursuits hopefully lead to filling an outstanding gap in the problem's structure.
- is able to explain how inquiry is possible by adopting this account of problems, and at the same time provides guidance for the conduct of research by marshalling the appropriate constraints that comprise heuristics and rules.
- is distinguished by the importance it attaches to the task of detecting empirical phenomena (Woodward, 1989), where phenomena are distinguished from data.
- maintains that theories are generated through a creative process of abductive reasoning (Josephson & Josephson, 1994), where abductive reasoning is a form of inference from descriptions of data patterns, or better, phenomena, to one or more plausible explanations of those data patterns.
- is a method for nascent theories seen as historically developing entities with an embedded urge to construct models by imagining something analogous to mechanisms whose nature we know.

Hence, Haig (2005) concludes that:

“the abductive theory of method aspires to be a coherent theory that brings together a number of different research methods and strategies that are normally considered separately. The account of phenomena detection offered is a systematic reconstruction of a practice that is common in science but that is seldom presented as a whole in methodological writings. The abductive depiction of theory construction endeavours to make coordinated sense of the way in which science sometimes comes to obtain knowledge about the causal mechanisms that figure centrally in the understanding of the phenomena that they produce” (p. 386).

Conclusive, the philosophy of science that correlates with the overall purpose and my underlying scientific approach is logical positivism with the corresponding realistic ontology. In the ontology of logical positivism, the basic assumption is that the world exists independently from the individual and that phenomena have a universal essence.

However, in opposition to Kuhn (1962), who argued for the use of only one paradigm and to expand the research within the set of rules, this research combines the most appropriate epistemology from different paradigms to enlighten and reinterpret the entrepreneurial personality as best as possible.

4.2 METHOD

The method section outlines the handling of the survey design and the measurement instruments subsequent to the scientific philosophy, where the paradigm and the ontology are settled as mainly logical positivism, and the epistemology emphasise the abductive approach in the methodology puzzle due to:

“Science typically proceeds as follows: constrained by a developing problem comprising a set of empirical, conceptual, and methodological considerations, certain data are brought to the researcher's attention and are ordered by detecting one or more phenomena. Once detected, these phenomena are explained by abductively inferring the existence of an underlying causal mechanism.” (Ward et al., 1999, p. 50)

In fact, Ward, Vertue and Haig (1999) conclude that “the abductive method provides valuable insights and suggestions for improving psychological assessment; its use will be tempered by pragmatic considerations. The complex, systemic nature of human functioning means that any case conceptualization will necessarily rest on simplifying assumptions and idealisations” (1999, p. 62).

The methodological puzzle covers cross-disciplinary research fields of entrepreneurship, leadership, and psychology besides quantitative and qualitative research methods which each must be considered according to different paradigms, ontologies and epistemologies.

The survey is designed to answer the research questions, to be explorative with valid measurement as required in the abductive method, and to impact the academic field. Each of the participating entrepreneurs is seen as a case that is measured, evaluated and interpreted by two tests, a comprehensive questionnaire and psychological analyses hereof. In addition of being individual cases, the entrepreneurs are seen as a group of entrepreneurs and groups of entrepreneurial actors with intersections and similarities to be revealed and further described. However, further investigation afterwards is suggested of entrepreneurial subgroups due to the limited number of participants in the survey.

Moreover, the survey is designed to reveal useful empirical results from which a new theoretical framing is developed by means of the abductive method. Hopefully, the research also recognizes the potential for personal entrepreneurial development for the benefit of entrepreneurs, mentors and policymakers. Below is the data collection, the data analysis, validity and research bias of the survey outlined.

4.2.1 METHODS FOR DATA COLLECTION

Early on, it was decided to conduct original research on a group of existing entrepreneurs to legitimize the outcome and assure the relevance of the description of the entrepreneurial personality. Thereby, the validation of the results has been approached beforehand as definitely concerning entrepreneurs and personality, and secondly of leadership in the context of entrepreneurs.

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The empirical results relate to the personally conducted survey of active and diverse entrepreneurs at the end of 2012 in the Danish incubation parks Nupark in Holstebro and Struer Business Park in Struer, and among growth-entrepreneurs who participated in a fast track program called “Business Boost” as a part of an EU- supported Interreg IV A Program (Øresund-Kattegat-Skagerrak): “KASK incubator – accelerating business growth”.

The entrepreneurs were found in the incubation park, Nupark in Holstebro due to Nuparks’ partial funding of the PhD project. Afterwards, more participants were added from a neighbouring incubation park, Struer Business Park, because of their interest in the project and also to increase the number of participants.

The procedure of contacting the entrepreneurs followed a pattern. First, the managers of the incubation park were consulted to exclude the few irrelevant tenants such as public service offices and “mailbox-businesses”. Second, I visited the rest of the tenants to introduce the project with written information, and 87 agreed to participate. After acceptance, the entrepreneurs received a link to the entire survey in SurveyXact, whereas 55 accomplished the personality test, 46 the personality test and the leadership test and 41 accomplished the whole survey. The reason for this procedure was the time-consuming nature of the survey, which is a well-known barrier for a busy entrepreneur.

In terms of comparing ordinary entrepreneurs with potential growth entrepreneurs, I contacted the managers of an entrepreneur project for upcoming entrepreneurial stars in Region Mid Jutland, Denmark: The Interreg project KASK Incubator with three Business Boost projects. The fourth project had recently started and was therefore not relevant to include. The distribution is outlined in Table 14.

|    | | | | | |
|--|-------------------|-------------------|-------------------|-------------------|-----|
| KASK Inkubator 2010-2012 | 1. Half year 2011 | 2. Half year 2011 | 1. Half year 2012 | 2. Half year 2012 | |
| Business Boost DK | BB-Team 1 | BB-Team 2 | BB-Team 3 | BB-Team 4 | SUM |
| Number of (individual) participants | 20 | 17 | 22 | | 59 |
| Number of enterprises | 20 | 14 | 19 | | 53 |
| Hereof active | ? | ? | ? | | |
| Number of participants in the Østergaard Survey | 1 | 3 | 3 | | 7 |

TABLE 14 KASK INCUBATOR PARTICIPANTS IN THE COHORT

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The participating entrepreneurs from this project were selected differently. The managers of the KASK project wrote to 59 entrepreneurs from the three programs with information about the survey. Seven agreed to participate in the survey, and only they were the only contacted. The report (in Danish) of the KASK project is available on request. From the evaluation report, the KASK project is described as follows in the report summary:

“KASK Incubator is an accelerator for growth in Scandinavian incubators. The project aims to take stock of the regional innovation system and the role of incubators. Startups within the target groups for the incubators will be offered an accelerator programme to help them achieve their individual goals and growth plans. Through implementation of a Business Coach Programme the level of coaching is improved as well as the network between the participating coaches. New platforms for networks and cooperation are developed throughout the project. The results will be followed and shared both during the project and in an evaluation after the project has ended.”

Accordingly, the cohort of entrepreneurs was either geographically situated in the two incubation parks Nupark and Struer Business Park in Mid Jutland or in the same region but independently located related to the KASK Business Boost Program. However, there will be no differentiation of the entrepreneurs due to their geographical location due to the number of participants. Instead, the cohort will be seen as one unit in the analysis of the quantitative and qualitative findings.

The survey was conducted electronically in 2012 distributed by electronic links directly to the email addresses of the respondents by appointment and using a comprehensive questionnaire consisting of the two test items (480 items of the personality test and 90 items of the leadership preference test) and the traditional questionnaire. The survey took each respondent approximately 2 hours to complete, which normally is a crucial obstacle in obtaining entrepreneurs' participation. The main instrument employed to collect data was SurveyXact. All respondents received a report with the results of the individual personality profiles psychologically interpreted as the reward for accomplishing the tests and the questionnaire.

4.2.2 METHODS FOR DATA ANALYSIS

In general, the abductive method consisting of an inductive and a deductive approach came up to expectations and revealed new knowledge about the entrepreneurial personality. The inductive approach was useful in open-ended questions in the questionnaire with the possibility to elaborate on the findings and likewise in the explorative analysis of the impact of leadership role preferences in relation to entrepreneurs. The deductive approach is visible in the construction of a questionnaire searching for verification and clarification of specific areas and also in the survey design with the selection of two tests and a questionnaire instead of interviewing. The inductive and deductive approaches are affiliated to the paradigms as follows: Logical positivism (induction) and Critical rationalism (deduction), both in Hermeneutic and Structuralism, and together as retrodution in Critical realism and as abduction in Pragmatism (Egholm, 2014).

Through generations, the inductive research method has proved relevant in case study research. Moreover, constructing theories from case studies is especially appropriate in new topic areas, often with a novel, testable, and empirically valid resultant theory (Eisenhardt, 1989; Eisenhardt & Graebner, 2007). Given that this survey contained 55 entrepreneurial cases from which the empirical data is drawn, the scientific method needs to detect empirical phenomena to explain the occurrence of those phenomena from which new models or theories of the causal mechanisms can be constructed.

Alternatively, another confirmation method is the abductive method, previously called the hypothetico-deductive method, where the hypothesis serves to provide an explanation of observed data (Laudan, 1981). This alternative theory of the scientific method ranges more broadly than either the inductive or deductive accounts of method with a distinctively structured complex of related tasks. Moreover, as an opposition to closure in causal theories, the abductive method treats explanations as sentences that, when added to the background theory, derive the observations (Konolige, 1992). Moreover, the psychological assessment and analysis match the abductive method (Ward & Haig, 1997; Ward, Vertue and Haig, 1999).

The traditional psychological assessment, in which I am authorized, use the necessary amount of tests, conversations and investigations until a useful output is retrieved in relation to support the individual in future choices, treatments or decisions. Thereby, the analysis continues across the collected results in a longer period and new methods and investigations might be added in severe occasions to ensure a valid and reliable result. The psychological method is a default method underlying this research.

In more detail, after the data collection of the active entrepreneurs, the responses from the personality test items and the leadership test items were coded and conducted through the Statistical Package for the Social Sciences (SPSS). The analysis and interpretation of these results and the answers from the questionnaire was handled by hand and by further analysis through SPSS and SurveyXact such as correlations and factor analyses.

Additionally, the robustness of the theoretical analysis is considered through triangulation method with empirical data results from a standardised personality test and the double test of personality and leadership preferences on the same cohort. The fact that the personality test results are standardised means that instead of comparing results with another group, then the entrepreneurs of the cohort are measured in relation to a normal population. Hence, the test results from a standardised personality test are displayed on a normal distribution curve (Gauss Curve).

Hence, I consider the survey and the empirical results to be robust, no matter in which connection they are presented.

4.2.3 INTERNAL VALIDITY

In order to measure, interpret and describe a concept accurately, the selected measurement instruments are highly important, especially when assessing individuals. Hence, the priority in relation to the measurement tools focuses on validity and reliability and to avoid superficial results. Consequently, solid measurement

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instruments which have proven their value over decades were in focus. Furthermore, due to personal ownership of a personality test and a leadership preference test, I have access into “the engine room” of measurement instruments that live up to the high standard requirements for this research into the entrepreneurial personality.

In the sections below, the measurement instruments: a normative personality test, an ipsative leadership test and a comprehensive questionnaire is presented in detail.

4.2.3.1 THE PERSONALITY TEST (PAPA TEST)

The personality test used in this survey, the Panastell Advanced Personality Aptitudes Test (PAPA Test), measures the personal potential in four main categories labelled Basic Aptitudes: Leadership Potential, Social Potential, Innovation Potential, and Potential for Effectiveness. Each main category (basic aptitude) consists of three functional categories, and each functional category consists of three personality factors. In all, the personality test outlines 52 variables, namely 4 basic aptitudes, 12 functional categories and 36 personality traits covering the entire personality (see Table 15).

The personality test is a psychometric inventory test and contains 480 items formed as statements. One such item is: “My well-being is highest during the summer.” The order of the test items is the same in every test session, and the test is accomplished in 30 to 60 minutes. All item answers in the present survey are distributed on a Likert scale ranging from 1 (totally disagree), to 4 (totally agree) avoiding the middle score to force a choice between the antagonistic viewpoints.

The answers are clustered by means of coding in item groups called test variables or traits. For example; the personality trait Flexibility is composed of 40 different item answers. In general, between 21 and 52 items make up each personality trait to verify the validity and reliability of the traits. With a total of 480 items and due to the construction design, the personality test is comparable with the Minnesota Multiphasic Personality Inventory (MMPI) and the California Psychological Inventory (CPI).

Additionally, the personality test contains a measurement formula for the internal congruence or cheating risk (tested on 16 pairs of identical or almost identical items) and a measure for biased responses. The entire cohort passed the congruence and bias check.

The personality test (PAPA Test)¹⁹ is standardised on an approximately representative Danish population of 840 individuals aged 18-70 years in respect to age, sex, social strata, ethnicity and geography, and validated over 20 years through more than 8.000 interviews of approximately one hour from a validation pool of around 20.000 individuals. The standardising of the used personality test built among others on

¹⁹ It is unethical to reproduce a psychological test in a public forum, since a psychological test is characterised by opaque items. Therefore, psychologists use parallel tests to avoid item iterations. Hence, the test is only presented in a few item examples to verify the content and the personality traits.

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Svalastoga's 5 stratifications and need no stratifications afterwards as often seen in database research. Neither is a non-population necessary (1959).

| Overview of the personality test variables in a hierarchy | | |
|---|---------------------------|--|
| 1 Leadership Potential | 1.1 Change Management | 1.1.1 Initiative 1.1.2 Risk Willingness 1.1.3 Creative Drive |
| | 1.2 Motivation Management | 1.2.1 Will of Delegating 1.2.2 Passion 1.2.3 Dominance |
| | 1.3 Efficiency Management | 1.3.1 Target Drive 1.3.2 Achievement Instinct 1.3.3 Decision-making Ability |
| 2 Social Potential | 2.1 Interaction | 2.1.1 Flexibility 2.1.2 Social Dependence 2.1.3 Adaption Capacity |
| | 2.2 Co-operation | 2.2.1 Tolerance 2.2.2 Social Maturity 2.2.3 Democratic Attitude |
| | 2.3 Integration | 2.3.1 Care 2.3.2 Responsibility 2.3.3 Will of Integration |
| 3 Innovation Potential | 3.1 Growth | 3.1.1 Exploration Drive 3.1.2 Preparedness for Change 3.1.3 Experience of Well-being |
| | 3.2 Power | 3.2.1 Vigour 3.2.2 Urge to Rebel 3.2.3 Self-preservation Instinct |
| | 3.3 Vitality | 3.3.1 Need for Contact 3.3.2 Dynamism 3.3.3 Personal Manifestation |
| 4 Potential for Effectiveness | 4.1 Stability | 4.1.1 Self-control 4.1.2 Objectivity 4.1.3 Structuring Capacity |
| | 4.2 Integrity | 4.2.1 Stress Tolerance 4.2.2 Self-confidence 4.2.3 Autonomy |
| | 4.3 Analytical Capacity | 4.3.1 Empathy 4.3.2 Systematic Mindedness 4.3.3 Reflectiveness |

TABLE 15 VARIABLES OF THE PERSONALITY TEST IN A HIERARCHY

A standardised test ensures that the outcome is compared to a normal population and thereby the results are distributed on a Gauss curve. As an example, a personality trait value of 1 and of 5 is comparable with the 5% of the population that possess this specific personality trait with the lowest score and the 5% of the population that have

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the highest score on this trait, respectively. Likewise, a score of 2 and 4 is comparable with 20% of the population, and a score of 3 is the most common and comparable with the middle 50% of the population. Hence, a score of 5 is rare in a normal population, and a result with a commonly high score of a cohort on specific personality traits indicates a significant group of people in comparison to the normal population.

The test instruction is electronic and included in the survey with the option to read it as often as needed to optimize the test conditions and secure the individual understanding of the procedure as well as the homogeneity in the completion of the test from time to time and from individual to individual.

The personality test demonstrated a significant high test - retest mean reliability coefficient of + 0.9 over 1 year, + 0.8 over 2 years and + 0.7 over 5 years (Oxvig-Østergaard, 1996, p. 22), measured on individuals primarily participating in developmental programs.

The 52 test variables are further mapped and tested according to all variable combinations with satisfactorily low item overlap and high content differentiation between the variables. The personality test used in the survey is privately owned and has been used professionally for business psychological purposes such as leadership development, career development and search and selection tasks for 30 years with Danish customers including DSB, Handelsbanken, FDC, i-data, Laan & Spar Bank and Aarhus University-HIH.

The main quantitative analyses in relation to the personality test are correlation analyses and factor analysis.

According to the essential meaning of correlation, correlations explain the degree of correspondence or relationship between two sets of scores by the correlation coefficient (r). The correlation coefficient (r) ranges from -1.00 to +1.00, where -1.00 indicates a complete reversed correlation and +1.00 indicates a complete correlation between the measured variables (Anastasi, 1988, p. 110).

The factor analysis was conducted on the scores of 55 entrepreneurs on 36 personality traits in line with previous psychologists. Historically, the psychological investigators computed the intercorrelations among individual items from many personality inventories, rather than correlating total scores on existing inventories. Guilford was one of the pioneers of this. "Despite the extensive research conducted by Cattell and his associates for more than three decades, the proposed traits must be regarded as tentative" (Anastasi, 1988, p. 542). Actually, factor analysis provides a technique for grouping personality inventory items into relative homogeneous and independent clusters. The grouping further facilitates the research of validity against empirical criteria and thereby contributes toward construct definition and permits an effective combination of scores for the prediction of specific criteria. Indeed, homogeneity and factorial purity are desirable goals in test construction, but not substitutes for empirical validation (Anastasi, 1988). Hence, the factor analysis was conducted in the effort to

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arrive at a systematic classification of personality traits as a contribution to the academic discussion.

Furthermore, the factor analysis operates with a sample size of either number of cases or subjects-to-variables, but an agreement of the valid minimum size is lacking. According to Arrindell and Van der Ende (1985), the survey of 55 entrepreneurs is sufficient, since, “An N = 50 was shown to be the minimum to yield a clear, recognizable factor pattern” (Arrindell & Van der Ende, 1985, p. 167). The number of entrepreneurs who conducted the two-hour questionnaire were 55 for the personality test, 46 for the leadership preferences test and 41 for the questionnaire. Moreover, the validity of the survey rests on the fact that between 21 and 52 items comprised each of the 36 personality traits, only components with an eigenvalue over 1.0 were used, and the KMO is above .60 in the main findings.

After the personality test, the cohort was given a leadership preference test which is presented in the next section.

4.2.3.2 THE LEADERSHIP PREFERENCE TEST (JOE’S TEST)

Based on the literature review, it was decided to incorporate a leadership preference test in the survey, and thereby a double test of personality and leadership preferences was part of the research design. The expectation is to find significant results in relation to the entrepreneurial personality and the leadership behaviour of an entrepreneur that are explicitly verified via double testing on the same cohort.

The selected leadership preference test was JOE’s Test. The name JOE’s Test is derived from Johnsen & Oestergaard. The leadership preference test was developed by Erik Johnsen and the industrial psychologist Per Østergaard and the behavioural theory underlying the test has been continuously developed by Johnsen over five decades (Johnsen, 2002).

In order to aid in interpreting the empirical results, the leadership test JOE is shortly explained.

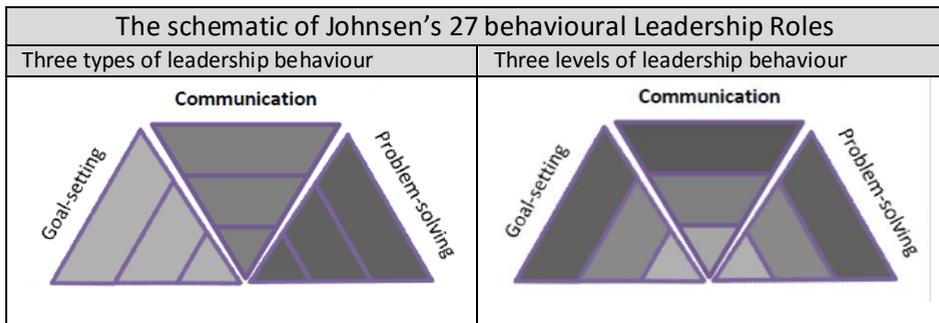


FIGURE 7 THE SYSTEMATIC OF JOHNSEN’S 27 LEADERSHIP ROLES

The leadership preference test, JOE’s test, operate with leadership behaviour connected to leadership roles distributed into three *types* of behaviour: goal-setting

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behaviour, communicating behaviour and problem-solving behaviour, and concurrently at three *levels* of behaviour: operating behaviour; adaptive, or more tactical, behaviour; and developmental strategic behaviour. The hierarchy is listed in Figure 7.

The coding abbreviations OG, AG, DG, DC, PC, SC, SP, IP, and EP explain the behaviour according to the three types and levels of behaviour (see Figure 8).

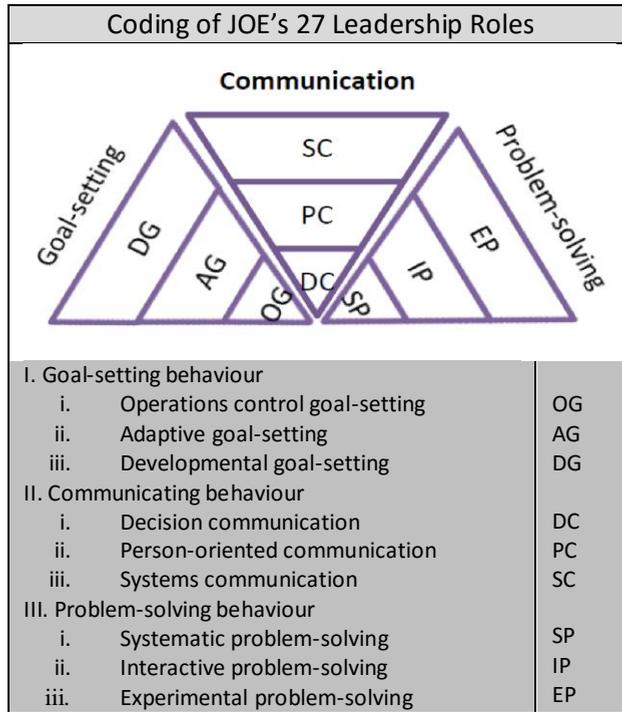


FIGURE 8 THE CODING OF JOHNSEN'S 27 LEADERSHIP ROLES

The reliability of the three cubes three, 27 leadership roles is dependent on the nine coding variables and their reliability. Hence, the reliability is confirmed by a Cronbach's alpha of 0.886 including all nine leadership role factors. All in all, 46 respondents completed the leadership preference test.

In a more exhaustive explanation, JOE's Test exists in three versions: 30 items, 60 items and 90 items. In this survey, JOE's Test contains 90 items to ensure the most validity. The accuracy of measurement is higher with more items due to the minimizing of random answers. The 90-item test has a completion time of 20 to 30 minutes. For each item the respondent has three alternative answers with a forced-choice response; no items can be skipped and only one answer is possible for each item.

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The test results are divided into nine different preferences of leadership behaviour. As a preference test, JOE's test is an ipsative test, where each of the nine variables (preferences) has a raw score span with 0 as a minimum and 30 as a maximum. The nine preferences of leadership behaviour are grouped into three categories. The first includes three types of goal-setting behaviour, the second three types of communicating behaviour and the third includes three types of problem-solving behaviour. In each of the three groups, the maximum score is 30, meaning that the ipsative test design secures exclusion in correlation with the item answers and allocates the scores within the group. For instance, variable scores on problem-solving behaviour can be distributed as four on Systematic problem-solving, eight on Interactive problem-solving, and 18 on Experimental problem-solving, meaning the preference is for Experimental problem-solving behaviour. The ipsative test design is characterised by an underlying either-or thinking that suggests all respondents are to be differentiated into two categories like good or bad and black or white.

In relation to the survey, three developmental leadership roles among the possible nine turn out to be of significant interest regarding the entrepreneurial personality: Number 25, the Entrepreneur; Number 26, the Strategist; and Number 27, the Statesman, why they are described below. A full description of each of the 27 leadership roles is available in Appendix 3.

The Entrepreneur leader role initiates new activities based on an unquenchable flow of ideas. The Entrepreneur is able to get things connected and to create synergetic value by formulating the objectives for the alteration process, and by generating the resources required by the alteration process' required resources, and by the development of the alteration itself (Johnsen, 2002, p. 579).

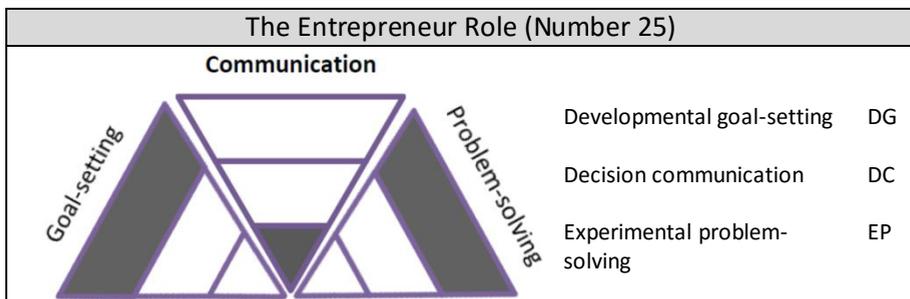


FIGURE 9 THE ENTREPRENEUR ROLE (NO 25)

The Strategist is a leader role, where the objective is to actively participate in the shift of the basic foundation for the firm's existence by deploying the search-learning process as a problem-solving tool concurrently with expressing perception verbally through the use of behavioural languages. Results are achieved through the implementation of various types of initiatives concerning individuals, immediate environment, organisational coherence (structure and function), political and value based behaviour along with a problem-solving methodology with a combination of strategic, innovative and political management processes (Johnsen, 2002, p. 568 - 572).

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FIGURE 10 THE STRATEGIST ROLE (NO 26)

The Statesman is a leader role for which one is elected or legitimated in accordance with the representatives who have legal responsibility in the organisation. The performance is based on two arguments: credibility in relation to the persuasion of the electorate or the authorities, and an ability to transform one's power into results desired by the same parties by managing available resources (Johnsen, 2002, p. 579).

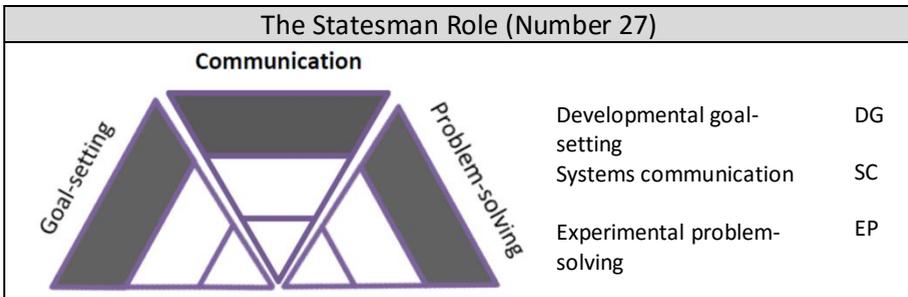


FIGURE 11 THE STATESMAN ROLE (NO 27)

After the leadership preference test accomplished by 46 respondents, the questionnaire presented in the next section was accomplished by 41 respondents.

4.2.3.3 THE QUESTIONNAIRE

The questionnaire has been designed for a dual purpose. First, the questionnaire consists of closed answers for statistical use and open answers to reveal new knowledge from the participant's comments on the entrepreneurial topics.

The questionnaire is designed as an interview guide to answer the research question with themes derived through the literature review and in line with the findings in the chapter of conceptualizations according to the science of philosophy and the connected abductive methodology. Consequently, the themes are: background facts, leadership, health and interests, time spent pursuing interests and activities, talent and family. In general, the questionnaire is rich of data, but the relevance turned out differently due to the content in the answers, the number of answers and the related analysis method, and the particular search of meaningful information enlightening the entrepreneurial personality. Hence, the results from the questionnaire are treated differently.

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An example of the extended qualitative information revealed from the combination of forced closed answers and open answers is outlined in Table 16:

| Example of question from the Questionnaire | |
|--|--|
| Question | I have started my enterprise – |
| Answer possibilities | 1 Primarily because of an emerged opportunity <input type="checkbox"/> 2 Primarily because of economic reasons <input type="checkbox"/> 3 Primarily because of personal ambitions <input type="checkbox"/> |
| Open comment box | “It became too boring to be an employee, and it was annoying seeing a group of stupid managers skim the cream.” |

TABLE 16 EXAMPLE OF THE COMBINATION OF A CLOSED AND AN OPEN QUESTION

The question theme is Entrepreneur by Opportunity or Necessity. The possibility of starting as an entrepreneur because of personal ambition was added, and from the three possibilities, the answer from the participant was: “Primarily because of personal ambitions”. Furthermore, this participant explains the personal motives related to ambitions in the open comment box. The reason for adding an extra motive to the opportunity-necessity-nexus originates from the second sub research question combined with the revealed need of search into active self-motivated action of entrepreneurs. The research results demonstrate that future discussions need to add ambition as a relevant reason to start an enterprise.

For further information, the questionnaire is repeated and unfolds in Appendix 1.

4.2.4 EXTERNAL VALIDITY

Unfortunately, the number of participants did not reach the 87 that originally agreed to participate. Hence, the cohort of 55 entrepreneurs accomplishing the personality test is seen as a pilot study of the entrepreneurial personality, which intends to be followed up in the future to verify the results further. However, a response rate of 63 percent for the personality test is acceptable in regard of the topic: The entrepreneurial personality and in relation to an entrepreneur’s fundamental lack of time.

Since the personality test is time consuming, a response renounce afterwards is expected, and I am genuinely thankful to the ones who completed both tests and the questionnaire in around 2 hours of their sparse time. Since the background data of the entrepreneurs is investigated via the questionnaire, the background data “only” cover 41 of the 55 entrepreneurs. Hence, the analysis has noted this limitation.

In general, the entrepreneurial cohort prefers having two children and being married, at least for the moment. The status as single seems to be preferable for one-fifth of the cohort, which can be explained due to the entrepreneurial dedication or their age.

The skew of gender, with five female entrepreneurs out of 55, is not preferable, but it is reflective of reality. In contrary to the gender skewness, the age distribution serves well in the investigation. Forty-six percent of the entrepreneurs are between 41 years and 50 years old, and the curve is well-balanced towards younger and elder entrepreneurs as outlined in Table 17.

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| Cohort details from The Østergaard Survey 2012 | | |
|--|--------|---------|
| Number of Participants | Number | Percent |
| Asked and distributed to | 87 | 100 |
| Accomplished the personality test | 55 | 63,22 |
| Accomplished both the personality test and the leadership test | 46 | 52,87 |
| Accomplished both the two tests and the questionnaire | 41 | 47,13 |
| Gender | Number | Percent |
| Male – Personality test (P test) | 50 | 90,90 |
| Female – Personality test (P test) | 5 | 9,09 |
| Male – P test and Leadership test (L test) | 41 | 89,13 |
| Female – P test and Leadership test (L test) | 5 | 10,87 |
| Male – P test and L test plus Questionnaire (Q) | 37 | 90,24 |
| Female – P test and L test plus Questionnaire (Q) | 4 | 9,76 |
| Age (Q participants) | Number | Percent |
| 01 – 20 | 1 | 2,4 |
| 21 – 30 | 1 | 2,4 |
| 31 – 40 | 8 | 19,5 |
| 41 – 50 | 19 | 46,3 |
| 51 – 60 | 7 | 17,1 |
| 61 – 70 | 4 | 9,8 |
| 71 – 80 | 1 | 2,4 |
| Children (Q participants) | Number | Percent |
| 0 | 5 | 12,2 |
| 1 | 8 | 19,5 |
| 2 | 16 | 39,0 |
| 3 | 6 | 14,6 |
| 4 | 5 | 12,2 |
| 5 | 1 | 2,4 |
| Marital status (Q participants) | Number | Percent |
| Single | 8 | 19,5 |
| In relationship | 4 | 9,8 |
| Married | 29 | 70,7 |
| Do not want to answer | 0 | 0 |

TABLE 17 COHORT DETAILS WITH NUMBER, GENDER, AGE, CHILDREN AND MARITAL STATUS

Finally, this cohort was found by chance, by dedication to the research foundation, and by my familiarity to the Incubation Parks and the Regional Project and their board of directors. Since this survey focus on exploring the field, trying out ideas, and assessing the correctness of assumptions, in that respect these active entrepreneurs are very satisfactory.

In fact, the highest priority has been to use valid and well-proven measurement. Throughout the study, validity was prioritised in the survey design, in the selected tests and in the construction of each question in the questionnaire. The survey takes into account three basic types of validity: criterion-related, content, and construct

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(Carmines & Zeller, 1979) and the four types of Cronbach and Meehl (1995): predictive validity, concurrent validity, content validity, and construct validity.

In contrast, the reliability is twofold. In the personality test, the reliability is significantly high, but the results relate to this specific cohort. Consequently, the reliability needs further investigations in different cohorts with different cultural backgrounds in regard to exhibit result reliability. However, overall the personality test of the survey is in accordance with the common perception that the concept of personality is stable and trustworthy, where multivariate analyses of personality traits are needed in taking the intercorrelations of traits into account (Rauch & Frese, 2006).

4.2.5 RESEARCH BIAS

Traditionally, analysis must consider the measurement instruments in order to incorporate a total measurement of all possible relevant factors and concurrently solve the challenges of bias. An alternative avenue is to conduct an explorative approach with new explanations and factor relations, and thereby present complementary as well as contradictory results that are intended for further investigation afterwards. This introduces new variables, new interpretations, and new paradigms into the academic discussion, as opposed to traditional measurement methods that validate well-known data in a given research field. However, the challenges of bias in the quantitative and qualitative part of the survey is reflected below.

In general, quantitative results suit a deductive method used to confirm theoretical hypotheses more often than developing new theory. In contrast, this research aims to suggest new avenues for theoretical development instead of confirming well-known areas of entrepreneurs. However, overviews of facts are achieved by means of the quantitative research methods such as factor analysis, and the test results emerge from quantitative methods combined with a comprehensive valid coding.

The advantages of quantitative methods include the possibility of comparing measurement results among scholars across countries, cultures and numbers of participants. Moreover, it is easy to combine information from a new quantitative measurement result to the current knowledge about a specific topic. In general, quantitative measurement results outline knowledge with clarity and simplicity.

On the other hand, one of the major limitations of quantitative methods is the simplifications the researcher must accept, including stereotyped conceptions of entrepreneurs being: different from employees, over the age of 18, active in the labour market and not retired, the CEO of an enterprise, full-time self-employed, run a venture over three years' old, and have more than five employees.

Another disadvantage of the quantitative method in relation to the entrepreneurial personality is the problem of validity and reliability. The limitation related to the lack of clear consensus of an entrepreneur continues in the results, such as a CEO's risk willingness used as an indicator and often the only indicator of the entrepreneurial personality.

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However, the quantitative method in the survey are first and foremost challenged by the low number of participants in relation to large database surveys. Furthermore, the study was conducted on entrepreneurs selected from an incubation parks and not on a representative part of the entire population as would be ideal. Hence, the shortcomings are primarily related to the cohort of preselected entrepreneurs from incubation parks and a small sample size in relation to advanced quantitative analyses.

Typically, a qualitative survey consists of one or a few case studies based on interviews combined with observations and secondary facts or an iterative process design with replication of interviews or single questions. The purpose is generally to use an inductive method to find the core of a problem or a pattern which explains the origin of a problem.

The advantages of qualitative surveys lie in obtaining a current representative example of the real story. The true story of an individual is highly valued and serves to enhance knowledge of a similar topic from which scholars can generalise and theorise. The most important advantage of an interview is the possibility of collecting original unplanned data. Moreover, the instruments are simple: an interview guide, recorder paper and pencil.

However, the limitations of the qualitative method involve the topic of investigations, whether the chosen individual is the best example of the topic, and the preparations and interpretations are carefully considered.

The qualitative method in this survey is challenged by using an electronic questionnaire instead of interviewing. However, the design of the questionnaire consists of questions which correlate with an interview guide. Thereby, the advantages of qualitative interviews are met in open-ended questions as a supplement to almost all themes. The open-ended questions follow a factual sequence and allow the respondent to expand their story and add extra points that had not been taken into account in the questionnaire.

In order to overcome the limitations of the quantitative as well as the qualitative research methods, this survey is a combination of both quantitative and qualitative methods with respect to the advantages of each method using both inductive and deductive method combined as the abductive method. Hence, the quantitative statements regarding the entrepreneurial personality demonstrate the importance of measuring the full personality in relation to personality traits and likewise the survey improves by validating the results with in-depth-interviews as well as large-scale surveys.

The survey was constructed in accordance with an explorative research with embedded curiosity and in accordance with the scientific abductive method with both deductive and inductive approaches. In general, the limitations of the survey are primarily related to the limitations of the quantitative and qualitative methods and the unfulfilled possibility to accomplish a longitudinal study.

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The optimal measurement of a cohort of entrepreneurs would be a measurement of all environmental impacts and all innate impacts as a longitudinal study with adequate and current measurement tools selected specifically for the purpose and measured using different types of well-defined entrepreneurs. Entrepreneurship is a complex, dynamic, multiphase process, where the entrepreneur's important personality characteristics at each phase currently not are identified due to difficulties of evaluating whether the personality characteristics of entrepreneurs are a predisposing factor or are learned from the role itself (Hisrich et al., 2007).

Eckhardt and Shane (2003) argue that personality characteristics predicting start-up behaviour may not predict behaviour later on in the entrepreneurship process. However, this approach only bears up if the entrepreneurial personality changes significantly along with the growth of business. In fact, not all enterprises have the same pattern of growth and likewise not all entrepreneurs have the same pattern of personality characteristics and the same pattern of context development over a lifespan. On the contrary, another reasonable possibility is that causation around entrepreneurial behaviour follows the personality of the entrepreneur regarding the preferred form of entrepreneurial business. Similarly, a reasonable possibility is that the start-up behaviour just is a first step towards diverse entrepreneurial processes linked to the individual type of entrepreneur. A further investigation hereof should be integrated in the empirical research.

PART II

Empirics

THE KNOWLEDGE DERIVED FROM ENTREPRENEURS

In this second part, the empirical results are anticipated to confirm or reject the a priori models, definitions and hypotheses developed theoretical in the first part. Concurrently, an overall investigation of the nature of the entrepreneurial personality in terms of the underlying main subjects processed and analysed through empirical research of 55 entrepreneurial cases consolidate an efficient exposition.

Starting with an investigation of the focal points of the entrepreneurial personality in a psychological framework, Chapter Five focuses directly on the personality of an entrepreneur, followed by investigating the nexus of leadership and entrepreneurship in Chapter Six to identify common leadership factors of entrepreneurs and outline the entrepreneurial leader personality.

Hence, Part II consists of two empirical chapters with a template of abductive method that outlines explorative empirical findings simultaneously with the first inaugural analysis. Additional, Chapter Seven process the empirical results further with

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reflections regarding the research questions, the inaugural analyses, and the previously developed a priori model.

Thus, the empirical analysis examines the research question: *How is the entrepreneurial personality constituted?* by investigating the empirical results derived from two valid and reliable test instruments used on the same cohort of active entrepreneurs. Moreover, the results are relevant combined with the answers from the comprehensive questionnaire. The aim of the empirical investigation is to shed light on the entrepreneurial personality by addressing the sub-questions in combinations.

The sub-question “*What is the psychological core of the entrepreneurial personality?*” is especially handled in Chapter Five addressing personality as the key point in accordance with measurement by a personality test. In effect, the factor analysis displays the core of the entrepreneurial personality distributed into nine factor types and psychological interpreted.

In contrast, the second sub-question “*How do nature and nurture interact shaping the entrepreneurial personality?*” is visible all over the empirics in the possible extent of this survey. A more prominent display of the distinction between nature and nurture requires measurement of for instance DNA, across generations and of isolated twin surveys. However, the shaping and especially the interaction between nature and nurture on the entrepreneurial personality is demonstrated in almost all results.

The matter of leadership in relation to the active entrepreneur cases is analysed with triangulation in Chapter Six by means of a leadership preference test that addresses the last sub-question: “*What is the relationship between leadership and entrepreneurial personality?*”

In general, the presented empirics are refined through a critical eye with a backward synthesised understanding and forward living interpretation (Weick, 1999) of the empirical findings.

CHAPTER 5. ENTREPRENEURIAL PERSONALITY TRAITS

“If Anyone on the Verge of Action Should Judge Himself According to the Outcome He Would Never Begin.”

Søren A. Kierkegaard

The empirical results in Chapter Five outline valuable insights to the entrepreneurial personality. Generally, the chapter pivots the sub-question “*What is the psychological core of the entrepreneurial personality?*” to answer the main research question.

In effect, the personality traits are inevitable when the objective is to investigate the composition of an entrepreneurial personality by means of psychological aspects. However, it requires that the perception of personality and of personality traits are dealt with and likewise the measurement conditions hereof as pursued in Chapter Three. Thereby, the theoretical reflection of the personality caused a renewed definition and a developed model to be verified and further developed through empirical evidence.

In a psychological view, a core aspect of the entrepreneurial personality is to outline the pattern of predominant, immaterial and trivial personality traits, for instance, patterns in relation to non-entrepreneurs, age, gender, and among entrepreneurs. Especially, the significant powerful or indifferent traits measured from active entrepreneurs are of great importance along with significant cohesions among the traits.

Hence, the analysis outlines the personality test results and explores them together with the conceptualized aspects advocating for a full personality profile instead of using a few amount of traits in measurements of entrepreneurs. A full personality profile of entrepreneurs displays both the strengths and weaknesses.

In addition, a factor analysis forms the empirical basis of a renewed typology of entrepreneurs with nine entrepreneurial factor types that are presented with their respective personality traits psychological interpreted.

5.1 THE BASICS OF THE PERSONALITY TEST RESULTS

The basics of the personality test results are outlined in this section. The Østergaard Survey was conducted with 55 entrepreneurs in 2012 using a standardised personality test containing: 4 Basic Aptitudes, 12 Functional Categories as subscales, and the functional categories each built on 3 Personality Traits. The first interesting results

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occur when the 55 entrepreneurs' personality scores from 1 to 5 on each of the 36 personality traits are stacked as an entrepreneurial profile in Figure 12.

5.1.1 THE ENTIRE ENTREPRENEURIAL PERSONALITY PROFILE

The stacked personality profile of 55 entrepreneurs' outlines peaks with high scores supporting the main theoretical and empirical contributions. In addition, the entrepreneurial profile also reveals valleys due to low scores. Generally, a peak or a valley indicate how these entrepreneurs especially differentiate from the common population, since the scores in a stacked profile in regard to the normal distribution curve would be flat.

Hence, the stacked personality profile outlines the results from these 55 entrepreneurs, but the results also indicate a proposition of an entrepreneurial profile in general that need further validation from multiple cohorts.

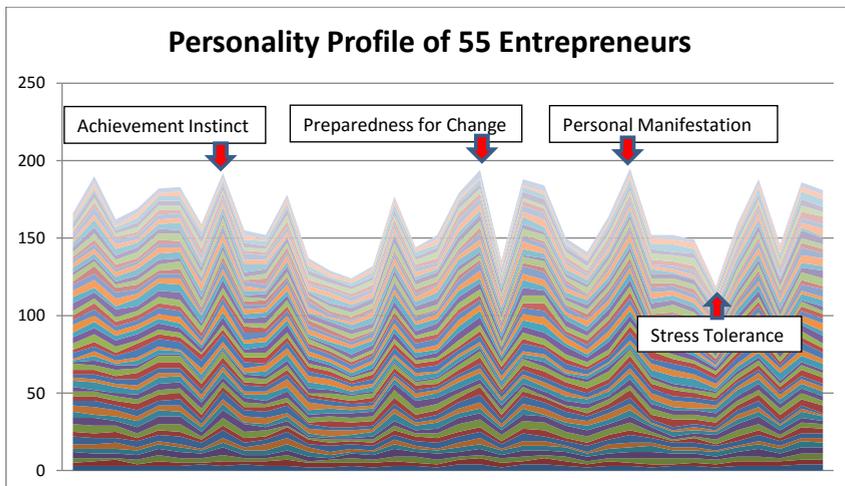


FIGURE 12 THE STACKED PERSONALITY PROFILE OF 55 ENTREPRENEURS' 36 PERSONALITY TRAITS.
THE ØSTERGAARD SURVEY 2012

In fact, common personality characteristics emerge along with less common ones as also outlined in Table 18. The six overall dominating traits from the survey are: Personal Manifestation, Preparedness for Change, Achievement Instinct, Risk Willingness, Autonomy and Vigour. Then, the six lowest scores of personality traits with the weakest presence in the unconscious behaviour of entrepreneurs are, starting with the lowest, Stress Tolerance, Social Maturity, Tolerance, Democratic Attitude, Experience of Well-being and Adaption Capacity. Consequently, the low scores are informative in explaining how these entrepreneurs are overloaded with stress symptoms and not feeling well besides not listening to others because they know one's own mind.

An additional confirmation is conveyed from a previous Danish study on, coincidentally, the same sample size of 55 entrepreneurial students measured with the same standardised personality test. Regardless, the students are not experienced

CHAPTER 5. Entrepreneurial Personality Traits

entrepreneurs, the expectation of an entrepreneurial mindset relies on their education as Business Development Engineers. The 7 top scores and 6 bottom scores from the 55 students are outlined next to the 55 entrepreneurs in Table 18.

| Ranked Score of Entrepreneurial Personality Traits and their belonging Category and Basic Aptitude | | | | | | |
|--|--------------------------|-----------------------|-----------------------------|-----------------------------|-----------------------|-----------------------------|
| | 55 active Entrepreneurs | | | 55 entrepreneurial Students | | |
| <i>HIGH</i> 1-6 | Personality Trait | Functional Category | Basic Aptitude | Personality Trait | Functional Category | Basic Aptitude |
| 1 | Personal Manifestation | Vitality | Innovation Potential | Risk Willingness | Change Management | Leadership Potential |
| 2 | Preparedness for Change | Growth | Innovation Potential | Personal Manifestation | Vitality | Innovation Potential |
| 3 | Achievement Instinct | Efficiency Management | Leadership Potential | Preparedness for Change | Growth | Innovation Potential |
| 4 | Risk Willingness | Change Management | Leadership Potential | Passion | Motivation Management | Leadership Potential |
| 5 | Autonomy | Integrity | Potential for Effectiveness | Will of Delegating | Motivation Management | Leadership Potential |
| 6 | Vigour | Power | Innovation Potential | Urge to Rebel | Power | Innovation Potential |
| (7) | | | | Achievement Instinct | Efficiency Management | Leadership Potential |
| <i>LOW</i> I-VI | Personality Trait | Functional Category | Basic Aptitude | Personality Trait | Functional Category | Basic Aptitude |
| I | Stress Tolerance | Integrity | Potential for Effectiveness | Social Maturity | Cooperation | Social Potential |
| II | Social Maturity | Cooperation | Social Potential | Tolerance | Cooperation | Social Potential |
| III | Tolerance | Cooperation | Social Potential | Experience of Well-being | Growth | Innovation Potential |
| IV | Democratic Attitude | Cooperation | Social Potential | Stress Tolerance | Integrity | Potential for Effectiveness |
| V | Experience of Well-being | Growth | Innovation Potential | Responsibility | Integration | Social Potential |
| VI | Adaption Capacity | Interaction | Social Potential | Self-control | Stability | Potential for Effectiveness |

TABLE 18 THE SIX HIGHEST AND THE SIX LOWEST SCORES OF PERSONALITY TRAITS, FUNCTIONAL CATEGORIES AND BASIC APTITUDES OF 55 ENTREPRENEURS, THE ØSTERGAARD SURVEY 2012 AND OF 55 STUDENTS, THE ØSTERGAARD SURVEY 2007.

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The high and low score results in Table 18 demonstrates how the aptitude Innovation Potential dominates within three different categories, Vitality, Growth and Power, where the traits Personal Manifestation, Preparedness for Change, and Vigour belong. Leadership Potential follows with the two functional categories Efficiency Management with the trait Achievement Instinct and Change Management with the trait Risk Willingness. Lastly, the trait Autonomy from the category of Integrity belongs to the aptitude Potential for Effectiveness. Thus, the innovation potential dominates in the entrepreneurial profile, followed by the potential of leadership. These results support the use of the term Entrepreneurial leadership and the interrelationship between innovation and leadership among entrepreneurs.

The similarity between the entrepreneurial cohort of entrepreneurs and the entrepreneurial students is remarkable. From the top scores, the students are represented only by two aptitudes: Leadership Potential and Innovation Potential, which are the same two dominating aptitudes for entrepreneurs. All three functional categories from Innovation Potential are represented by the students exactly as with the entrepreneurs, and likewise with the traits Personal Manifestation and Preparedness for Change. Only Vigour is replaced with the trait Urge to Rebel by the students. The Potential for Effectiveness and one trait from Innovation Potential are shifted towards Motivation Management for the students.

All in all, the students are more rebellious and more communicative in their behaviour than experienced entrepreneurs, who are more autonomous. However, it is an equally entrepreneurial pattern outlined in the top scores.

On the lower end, the three personality traits Social Maturity, Tolerance, and Democratic Attitude come from the category Cooperation and the aptitude Social Potential. In addition, the trait Adaption Capacity from the functional category Interaction belongs to the same aptitude. The lowest stacked score is Stress Tolerance, which comes from the functional category Integrity and the aptitude Potential for Effectiveness. However, the lowest scoring trait, Experience of Well-being, is from the category Growth and the aptitude Innovation Potential.

The knowledge demonstrated by the low scores on Stress Tolerance and Experience of Well-being is evident. Even though an entrepreneur is often described as resilient and 'waking up with a smile', everyone has only a limited amount of energy. Despite high expectations for an entrepreneur, the facts indicate that the entrepreneur needs to cover many functions in their daily life and might need a supportive environment. Otherwise, the entrepreneur risks decreased well-being, which affects their ability to collect enough resources to innovate and create growth.

In the lowest scores for personality traits of the students, the personality aptitude Social Potential leads, followed by Potential for Effectiveness, which is the same pattern from the cohort of entrepreneurs with low scores on the traits Social Maturity and Tolerance from the functional category Cooperation. The students have two low scores from Potential for Effectiveness: Stress Tolerance from the functional category Integrity, and Self Control from the category Stability, which indicates an anticipated

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premature level of entrepreneurs since the students had not launched an enterprise at the moment of measurement.

Still, the most remarkable score is the low score on the trait Experience of Well-being from the category Growth and the aptitude Innovation Potential by both the students and the established entrepreneurs. In fact, further investigation is needed into this tendency of entrepreneurs to struggle and to be under pressure.

5.1.2 INITIAL ANALYSIS OF THE PERSONALITY TEST RESULTS

This study of the entrepreneurial personality was conducted using a standardised personality test with 55 entrepreneurs (see section 4.2.3.1). The results reveal new knowledge in the context of an explorative study with limited significance due to the number of participants. The personality results were analysed using the Statistical Package for the Social Sciences (SPSS) (see section 4.2.2) to perform some elementary data from a statistical analysis.

The mean scores on all 36 personality traits are between 2 and 4 on a scale ranging from 1 to 5 on a normal distribution curve. In contrary to the common perception of entrepreneurs being extreme (comparable with scores on 1 or 5), the results indicate that average entrepreneurs are moderate positioned around the middle score 3, when measured with a valid and reliable personality test.

However, the standard deviation matters in the interpretation of the scores, and the standard deviation is above 1 (N=55) for the following seven personality traits: Initiative, Dominance, Target Drive, Vigour, Urge to Rebel, Objectivity, and Reflectiveness.

Usually, a high standard deviation indicates that the cohort has no precise characteristics with somewhat ambiguous possibilities for interpretation. Moreover, when the statistical analysis produces a high deviation, then the kurtosis of the bell-curve is flatter and might even have several peaks indicating more than one group within the cohort.

In contrast, a low standard deviation indicates an unequivocal characteristic of the measured item or scale score point value in relation to the measured cohort. In the case of low deviation, the kurtosis displays a bell-curve slope, which indicates homogeneity of the cohort in relation to the selected item (Howitt & Cramer, 2014). In this case, the standard deviation is below 0.7 for the following personality traits: Social Maturity, Democratic Attitude, Experience of Well-being and Self-confidence (N=55).

However, the most interesting and distinct results occur when the mean indicates an extreme high or low score together with a low deviation. From the descriptive statistics, there are no personality traits with an extreme high mean score only low scores below the scores of a normative population. The lowest mean score together with a low standard deviation is seen with Social Maturity, Democratic Attitude, Experience of Well-being, and Self-confidence. Thereby, these entrepreneurs are under an immense pressure impacting their well-being and self-confidence and

besides they have a limited ability to act appropriate in relation to others with potential negatively impact on the entrepreneurial activity.

In regard to standard deviation, the vaguest results relate to personality traits with a mean above 3: Initiative, Dominance, Vigour, Urge to Rebel, and Reflectiveness, and two personality traits with means below 3: Target Drive and Objectivity. Hence, these traits exhibit the most unclear characteristics of the entrepreneurial cohort, meaning that the entrepreneurs differ in relation to these traits. Thereby, a deeper insight is desirable by further research in relation to these traits.

A Kaiser-Meyer-Olkin Measure (KMO) above 0.5 is sufficiently high to make the factor analysis suitable. However, in cases with inadequate samples a KMO about 0.7 is preferable (Field, 2013) and in a relative small survey such as this the correlation factor must be close to 0.7, according to Stevens (2012). Generally, fifty observations with a correlation of 0.722 are significant (Field, 2013; Stevens, 2012). In this survey, the factor analysis conducted of the nine entrepreneurial factor types displays a KMO on 0.7 exposing an acceptable correlation on the whole with substantial factors accounting for 80 per cent the reliable variance. (Kaiser-Meyer-Olkin test = 0.685, Bartlett test of sphericity = 1255.85, and a cumulative explained variance of 9 factors = 80%).

Consequently, the survey results of 36 standardised personality traits measured of 55 entrepreneurs appear to be reliable and thereby justify the legitimacy of the associated psychological interpretation of the entrepreneurial personality. First of the full personality profile, and secondly in relation to the factor analysis conducted for deeper investigation into an enhanced typology of entrepreneurs, once the correlations were found to be significant.

5.1.3 THE KNOWLEDGE DERIVED FROM THE FULL PERSONALITY PROFILE

Entrepreneurs are first and foremost vulnerable in regard to their personal welfare due to their high intensity of leadership and innovation according to the comparison of established entrepreneurs and future entrepreneurs in Table 18. However, an entrepreneurial coping strategy seems to be a battery of inner needs or skills explained by the traits Personal Manifestation, Preparedness for Change, Risk Willingness, and Achievement Instinct. In addition, inexperienced entrepreneurs rely on, primarily, Passion and Urge to Rebel while mature entrepreneurs draw upon Vigour that presumably represents the typical entrepreneurial behaviour.

In general, the survey results are congruent with existing research, such as Risk Willingness, Achievement Instinct, and Autonomy traits being characteristics of entrepreneurs (Hoffmann, 2004; Judge, Bono, Ilies, & Gerhardt, 2002; McClelland, Winter, Larrere, & Nathan, 1998; McClelland & Burnham, 2003; McClelland, 1987). Furthermore, this explorative survey supports measuring the full personality as opposed to measuring single traits of entrepreneurs as previously discussed.

Hence, the main finding is the new pattern of entrepreneurial personality traits that occurs from the full picture revealing both the high scores as well as the low scores of the entrepreneur. Certainly, it is not flattering to possess poor social skills, but on the

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other hand the results suggest why the entrepreneurs are capable to endeavour alone and rely on their own skills. Moreover, the results support why experienced, former entrepreneurs tend to be the best mentors that are respected of the start-up entrepreneurs. Additionally, the personality profile of active entrepreneurs' outlines strength in both leadership and innovation as basic foundation traits of entrepreneurs.

In fact, the breadth of functional categories shows the palette of functions, tasks and interests an entrepreneur must manage, as well as the required talent and knowledge for solving everyday challenges.

From the entrepreneurial personality profile analysis, a coping recipe arise that may be useful as a teaching tool: In regard of the respondent's personality trait scores, the deficits in well-being and stress tolerance are counterbalanced with the highly loaded personal manifestation and preparedness for change. Since, the personal manifestation requires endurance and hope, and the preparedness for change also match a flexible goal-setting as seen in leadership behaviour, then the combination of these traits, in a psychological interpretation, represent a belief in own ability to succeed. In addition, hope is the most deterministic factor in overcoming odds (Werner & Smith, 1992), hence, the notion is that entrepreneurs in general maintain a profound resilience in relation to solve problems and an ability to turn them into new options.

5.2 A FACTOR ANALYSIS OF PERSONALITY TRAITS

In the footsteps of Thurstone, an explorative factor analysis was conducted to make sense in the complex set of variables from the significant 36 personality traits measured of 55 active Danish entrepreneurs, which is above the suggested minimum of 50 cases (Howitt & Cramer, 2014). For thirty years, Thurstone investigated the psychological implications of factor analysis (Thurstone, 1928; 1959; 1929; 1931; 1944; 1947; 1948). Thurstone found the baseline of the frequency distribution of distinctive importance: "The baseline represents ideally the whole range of opinions from those at one end who are most strongly in favour of the issue to those at the other end of the scale who are as strongly against it." (Thurstone, 1928).

Thus, the measurement problem has the limitation that the measured attributes must be represented on a linear continuum, which is common to all measurements, but the measurement is then limited to comparing individuals by "more or less" type of judgment, in this case - more or less entrepreneurial. Thurstone explains how the centre of the problem lies in the definition of a unit of measurement for the baseline. Usually, the scale is constructed with two opinions affected by the endorsement or rejection of statements which are separated by a unit distance. Hence, the baseline allocates individuals along an attitude continuum based on the opinions that they have accepted or rejected. However, "the true allocation of an individual to a position on an attitude scale is an abstraction, just as the true length of a chalk line" (Thurstone, 1928).

Regarding the diversity among entrepreneurs (e.g. Miller, 2015a; Gorgievski & Stephan, 2016), the mutual effect of the factorial methods and the psychological

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concepts as scientific methods adjusted to each problem occasionally cause encouraging results:

“A factorial study is more likely to give convincing findings if it covers a restricted domain with only enough measures of known factorial composition to serve as a linkage between the factors that are already known and the factors that we hope to discover or isolate” (Thurstone, 1948, p. 402).

By means of an explorative factor analysis, nine factors were extracted by a principal axes analysis, and the two first of the factors demonstrate an especially high eigenvalue (9.674 and 7.636 respectively). The clearest structure was achieved by an oblimin rotation with Kaiser normalization from which 9 factors out of 36 demonstrated an eigenvalue above one. As mentioned previously, the factor analysis displays a KMO on 0.7 (Kaiser-Meyer-Olkin test = 0.685, Bartlett test of sphericity = 1255.85, and a cumulative explained variance of 9 factors = 80%).

In addition, the factor correlation matrix also extracted by principal component analysis and cleared out by an oblimin rotation with Kaiser normalization display highest correspondence between Factor One and Factor Four (0.226), Eight (0.222) and Seven (0.208), and a correspondence between Factor 2 and Factor 4 (0.310). On contrary, Factor One is in opposition to Factor Nine (-0.342), Five (-0.241) and Three (-0.225). Consequently, the anticipation is that all nine factors possess valuable and diverse information to be further investigated as separated entrepreneurial types within the category of entrepreneurs. Thereby, the analysis concerns the substantial elements; the personality traits, one factor at a time analysing and psychological interpreting the significant personality trait pattern with either positive or negative values.

A structure matrix by a principal axes analysis method and an oblimin rotation with Kaiser Normalization between the nine factor types and the 36 personality traits measured of 55 active entrepreneurs (Cronbach's Alpha = 0.928) yield the value of all traits for each of the nine factors. A numeric limitation of 0.3 ensures tangible figure content comprehensive enough to interpret psychological. Additionally, validation regarding the affiliation towards the respondent and the correspondence to the theoretical developed four core personality traits is presented when relevant and demonstrated in the first factor type.



FIGURE 13 ORGANISATION OF THE PERSONALITY TRAIT, FUNCTIONAL CATEGORY AND BASIC APTITUDE

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The personality traits for each factor type are created from the structure matrix results, and organised as outlined in Figure 13 with four basic aptitudes each containing three functional categories with each three personality traits according to the colour distribution in Figure 14. The darker the colour, the higher the score, positive or negative respectively. In general, the black framing in the personality profile relates to personality trait scores to be aware of above 0.3 when interpreting. Moreover, the framing and colouring of the functional categories and the aptitudes are related to the strength of at least two of the relevant sub scores.

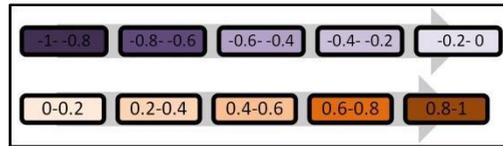


FIGURE 14 COLOUR DISTRIBUTION OF THE FACTOR PERSONALITY PROFILES

5.2.1 FACTOR ONE – THE SYNNOVATION CREATOR

First, the personality traits of the entrepreneurial factor type are presented with a significant reliability coefficient (Cronbach's Alpha = 0.9). Factor One consists of 17 personality traits and one of them (Adaption Capacity) is negatively related as outlined in Table 19.

| FACTOR ONE | Values > 0.3 |
|----------------------------|---------------|
| Need for Contact | 0.873 |
| Dominance | 0.785 |
| Personal Manifestation | 0.712 |
| Passion | 0.669 |
| Will of Delegating | 0.667 |
| Initiative | 0.635 |
| Will of Integration | 0.602 |
| Self-confidence | 0.553 |
| Vigour | 0.544 |
| Achievement Instinct | 0.454 |
| Stress Tolerance | 0.396 |
| Dynamism | 0.386 |
| Experience of Well-being | 0.371 |
| Exploration Drive | 0.358 |
| Self-preservation Instinct | 0.325 |
| Care | 0.303 |
| Adaption Capacity | -0.454 |

TABLE 19 FACTOR ONE CONSISTING OF 17 PERSONALITY TRAITS |0.3|

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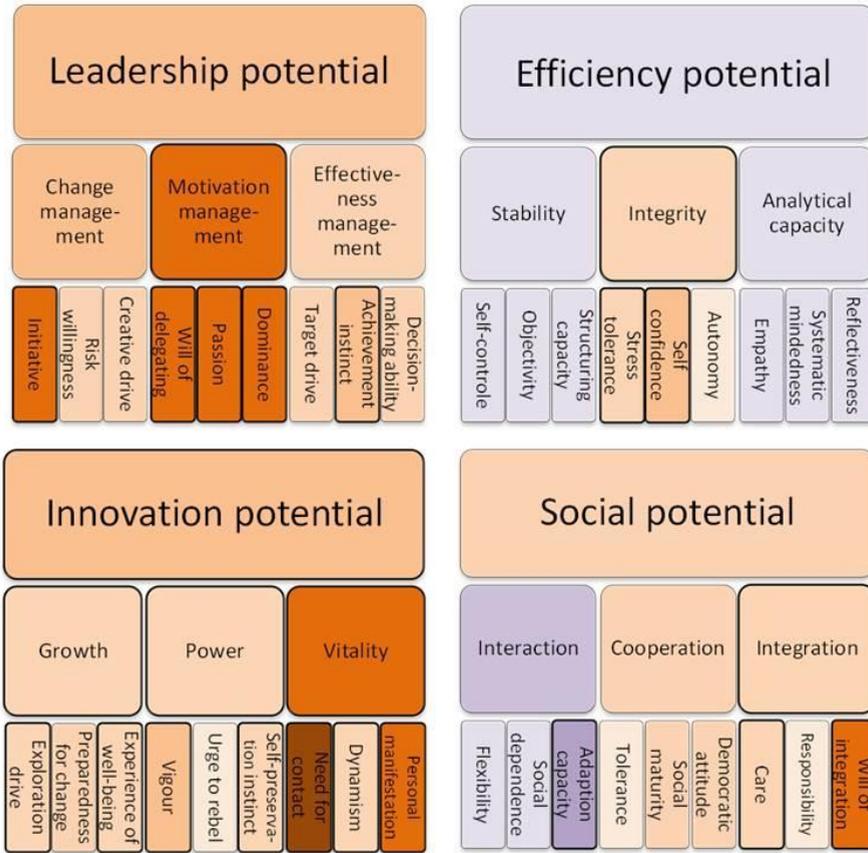


FIGURE 15 FACTOR ONE: THE SYNNOVATION CREATOR. THE ØSTERGAARD SURVEY 2012

From a psychological perspective, the Factor One entrepreneurial profile, the Synnovation Creator, is characterised by a remarkable drive and interest in the innovation process as a social activity designed and managed by the entrepreneur. The Synnovation Creator is aware of the importance of group processes and the synergetic power of the dedicated group members. Thus, the Synnovation Creator stimulates employees or other human resources committed to the purpose of innovation with lots of attention, care and motivational effort.

A set of cross tabulations outlines the relationships between Factor One and the degree of affiliation of the respondent, Factor One and the four theoretical extracted core traits, and Factor One and the entrepreneur leadership role, the strategist leadership role and the statesman leadership role. The frequencies of Factor One are distributed in groups of respondent dummies that differentiate between medium scores below 48, from 48 to 52, and high scores from 58 to 68.

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Hence, Factor One is related in a medium degree to 15 of the respondents, in a high degree to 18 respondents, and to a single respondent with the highest overall score. Moreover, the Factor One type of entrepreneur relates to more than half of the respondents, 31 individuals (56%). The respondents with the highest affiliation towards Factor One are the following 17 entrepreneurs: R01, R07, R08, R12, R18, R21, R22, R23, R26, R37, R39, R40, R42, R46, R50, R54, and R55. Furthermore, the respondents with the highest affiliation towards Factor One is male, while females display a medium affiliation.

In terms of confirming the Factor One entrepreneur type, a cross tabulation demonstrate that the theoretical core of an entrepreneur corresponds with Factor One on a baseline (Thurstone, 1928): respondents with high scores in relation to Factor One also score high in relation to the basic set of personality traits and the low scores correspond alike. Generally, the respondents with high scores and therefore a high affiliation towards the Factor One corresponds to high strength of the leadership role, the Entrepreneur, which is further described in Chapter Six. Moreover, the respondents affiliated with the Factor One type also has a high, but not as significant, score on the leadership roles, the Strategist and the Statesman. However, the respondents strongly affiliated towards Factor One demonstrates no significant correlation towards the number of businesses, bankruptcy, or employees.

Conclusive, the theoretical core of an entrepreneur consisting of four selected personality traits turn out to be in accordance with the factor with the highest eigenvalue: The Synnovation Creator. Moreover, Factor One corresponds with the preferred leadership role, The Entrepreneur, which speaks in favour of the concept of the entrepreneurial leader and, in general that leadership skills are important part of being an entrepreneur.

5.2.2 FACTOR TWO – THE ADMINISTRATOR

| FACTOR TWO | Values > 0.3 |
|-----------------------|------------------|
| Objectivity | 0.889 |
| Structuring Capacity | 0.821 |
| Target Drive | 0.702 |
| Systematic Mindedness | 0.647 |
| Reflectiveness | 0.511 |
| Self-control | 0.475 |
| Empathy | 0.372 |
| Responsibility | 0.363 |
| Will of Delegating | 0.347 |
| Flexibility | -0.370 |
| Risk Willingness | -0.440 |
| Creative Drive | -0.745 |

TABLE 20 FACTOR TWO CONSISTING OF 12 PERSONALITY TRAITS |0.3|

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Factor Two consists of 12 personality traits with a significant reliability coefficient (Cronbach's Alpha = 0.9), where three of them are negatively related: Flexibility, Risk Willingness and Creative Drive, which is displayed in Table 20.

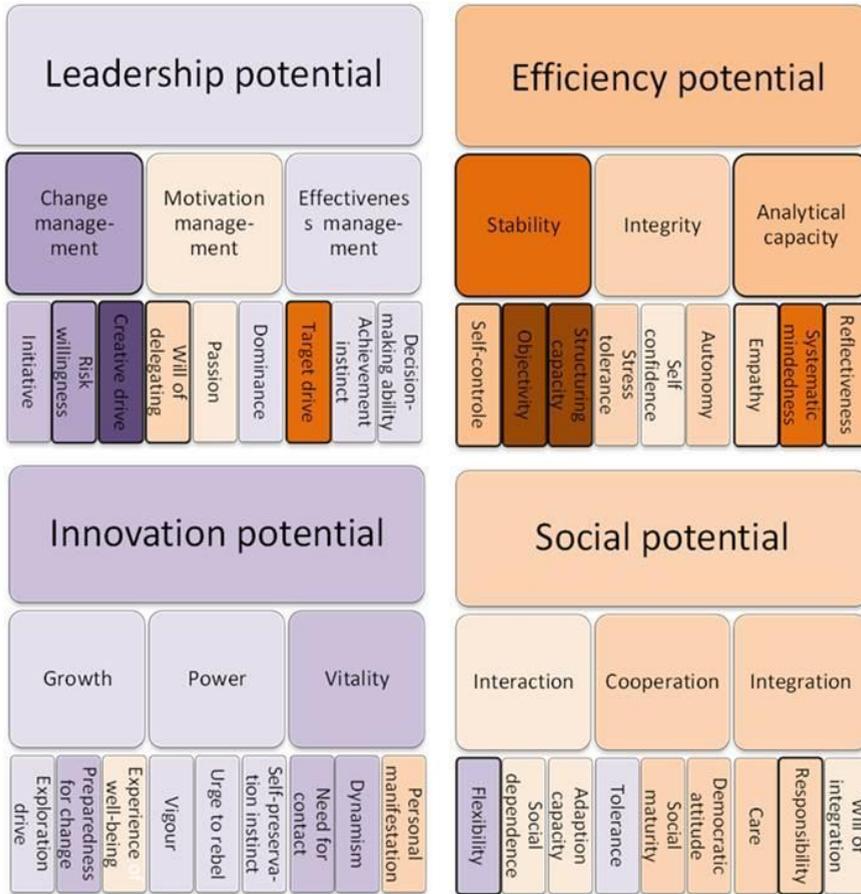


FIGURE 16 FACTOR TWO: THE ADMINISTRATOR. THE ØSTERGAARD SURVEY 2012

The Administrator in a psychological interpretation is characterised by a very high personal stability, social responsibility, systematic mindedness, and a preference for order, target retaining and following “business as usual”. The Administrator avoids risk-taking and creative activity.

5.2.3 FACTOR THREE – THE DESPERATE SURVIVOR

From a psychological perspective, The Desperate Survivor is a disillusioned, frustrated and mentally injured person who struggles with code of practice advocating for new ideas and inventions. The Desperate Survivor still retains traces of dynamic and rebellious behaviour in the personality, which indicates a weak option of being a fighter or the entrepreneurial recipe of coping with critical conditions. The Desperate Survivor is a vulnerable and insulating individual with low stress tolerance, low self-control and no interest in social obligations.

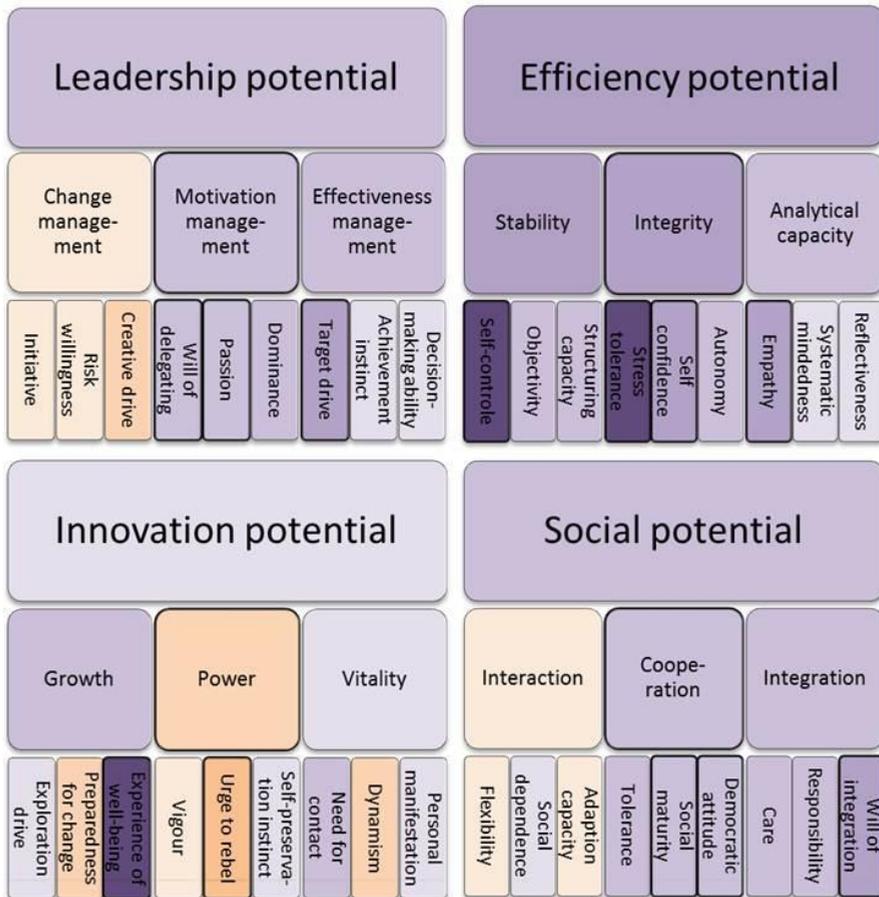


FIGURE 17 FACTOR THREE: THE DESPERATE SURVIVOR. THE ØSTERGAARD SURVEY 2012

Factor Three consists of 12 personality traits with a significant reliability coefficient (Cronbach's Alpha = 0.9), where only one trait, Urge to Rebel, is positively related as outlined in Table 21.

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| FACTOR THREE | Values > 0.3 |
|--------------------------|---------------|
| Urge to Rebel | 0.476 |
| Social Maturity | -0.307 |
| Will of Delegating | -0.344 |
| Democratic Attitude | -0.373 |
| Passion | -0.387 |
| Target Drive | -0.409 |
| Will of Integration | -0.483 |
| Self-confidence | -0.521 |
| Empathy | -0.569 |
| Self-control | -0.698 |
| Experience of Well-being | -0.732 |
| Stress Tolerance | -0.797 |

TABLE 21 FACTOR THREE CONSISTING OF 12 PERSONALITY TRAITS |0.3|

5.2.4 FACTOR FOUR – THE TEAM ORGANIZER

Factor Four consists of 16 personality traits with a significant reliability coefficient (Cronbach's Alpha = 0.9). One of these traits, Risk Willingness, is negatively related.

| FACTOR FOUR | Values > 0.3 |
|------------------------|---------------|
| Responsibility | 0.883 |
| Social Maturity | 0.742 |
| Democratic Attitude | 0.742 |
| Care | 0.740 |
| Will of Integration | 0.625 |
| Passion | 0.530 |
| Target Drive | 0.484 |
| Empathy | 0.431 |
| Structuring Capacity | 0.404 |
| Objectivity | 0.385 |
| Personal Manifestation | 0.380 |
| Reflectiveness | 0.369 |
| Autonomy | 0.358 |
| Will of Delegating | 0.344 |
| Stress Tolerance | 0.330 |
| Risk Willingness | -0.420 |

TABLE 22 FACTOR FOUR CONSISTING OF 16 PERSONALITY TRAITS |0.3|

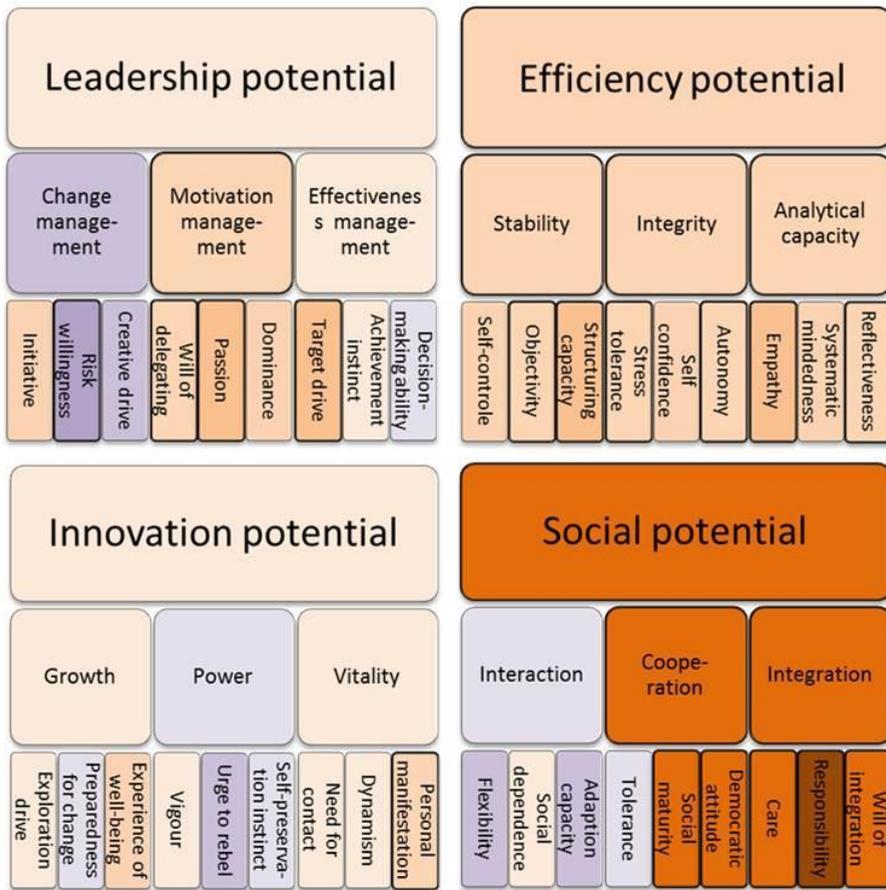


FIGURE 18 FACTOR FOUR: THE TEAM ORGANIZER. THE ØSTERGAARD SURVEY 2012

In a psychological interpretation, the Team Organizer feels morally committed to improve the world socially, preferably by following a program or a script instead of adapting via flexibility and tolerance. The Team Organizer is characterised by a passion for the purpose, high empathy and a high structuring capacity. The motivational drivers are visibly measurable results from one's own effort and dedicated efficiency and reliability in the team.

The respondents with the highest affiliation towards the Factor Four type of entrepreneur, the Team Organizer, are: R05, R07, R09, R10, R11, R14, R16, R18, R21, R26, R33, R34, R37, R39, R40, R41, R42, R43, R46, and R50.

5.2.5 FACTOR FIVE – THE BAG CARRIER

The Bag Carrier is, from a psychological perspective, a deeply socially dependent individual adhering to the opinions and ideas of influential people. The Bag Carrier constantly fits and adapts to the current social environment. This focus on adaptation

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| FACTOR FIVE | Values > 0.3 |
|-------------------------|---------------|
| Social Dependence | 0.801 |
| Adaption Capacity | 0.663 |
| Structuring Capacity | 0.450 |
| Personal Manifestation | -0.311 |
| Need for Contact | -0.328 |
| Creative Drive | -0.341 |
| Self-confidence | -0.385 |
| Decision-making Ability | -0.390 |
| Vigour | -0.396 |
| Risk Willingness | -0.472 |
| Initiative | -0.493 |
| Dominance | -0.537 |

TABLE 23 FACTOR FIVE CONSISTING OF 12 PERSONALITY TRAITS |0.3|

5.2.6 FACTOR SIX – THE OPPORTUNIST

Factor Six consists of 13 personality traits with a significant reliability coefficient (Cronbach's Alpha = 0.9). Four of the personality traits are positively related: Flexibility, Tolerance, Risk Willingness and Creative Drive.

| FACTOR SIX | Values > 0.3 |
|-----------------------|---------------|
| Flexibility | 0.766 |
| Tolerance | 0.594 |
| Risk Willingness | 0.391 |
| Creative Drive | 0.357 |
| Objectivity | -0.300 |
| Responsibility | -0.301 |
| Autonomy | -0.321 |
| Target Drive | -0.361 |
| Care | -0.397 |
| Structuring Capacity | -0.410 |
| Will of Integration | -0.417 |
| Reflectiveness | -0.427 |
| Systematic Mindedness | -0.557 |

TABLE 24 FACTOR SIX CONSISTING OF 13 PERSONALITY TRAITS |0.3|

The personality of the Opportunist is characterised by a high degree of tolerance and flexibility accompanied by an inclination to take risks and find new solutions while overcoming obstacles. At the same time, the Opportunist takes no interest in personal involvement, care or responsible commitment towards others or towards a stable social life. The results of the Opportunist's activity are primarily coincidental due to unengaged and unpretentious target setting.

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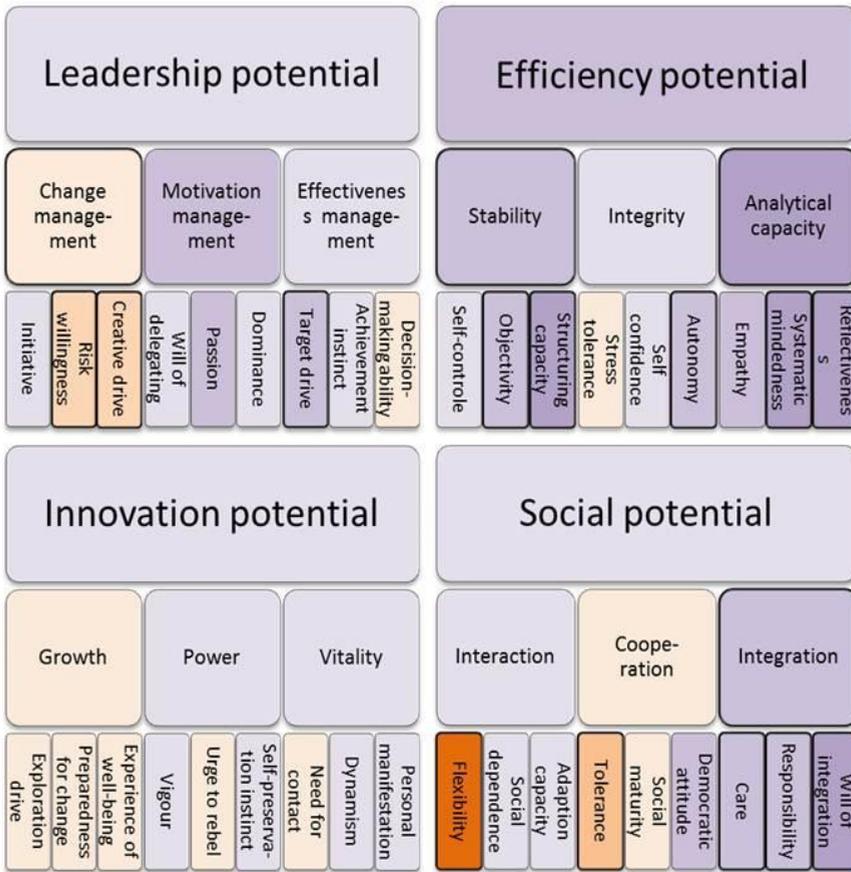


FIGURE 20 FACTOR SIX: THE OPPORTUNIST. THE ØSTERGAARD SURVEY 2012

More importantly, this factor is in opposition to the entrepreneurial mindset. None of the entrepreneurs in the cohort scored above 50, and half of them scored below 34. This indicates that Risk Willingness is not necessarily part of the common entrepreneurial characteristics, but a personality trait primarily for those with an opportunistic mindset.

5.2.7 FACTOR SEVEN – THE REBEL

Factor Seven consists of 9 personality traits with a significant reliability coefficient (Cronbach's Alpha = 0.9) displayed in Table 25. Five personality traits are positively related and four negatively related. All of them have a relatively low value except for Decision-making Ability and Reflectiveness.

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| FACTOR SEVEN | Values > 0.3 |
|-------------------------|---------------|
| Decision-making Ability | 0.760 |
| Dominance | 0.382 |
| Risk Willingness | 0.375 |
| Self-Confidence | 0.374 |
| Urge to Rebel | 0.345 |
| Objectivity | - 0.318 |
| Systematic Mindedness | -0.328 |
| Empathy | -0.340 |
| Reflectiveness | -0.556 |

TABLE 25 FACTOR SEVEN CONSISTING OF 9 PERSONALITY TRAITS |0.3|

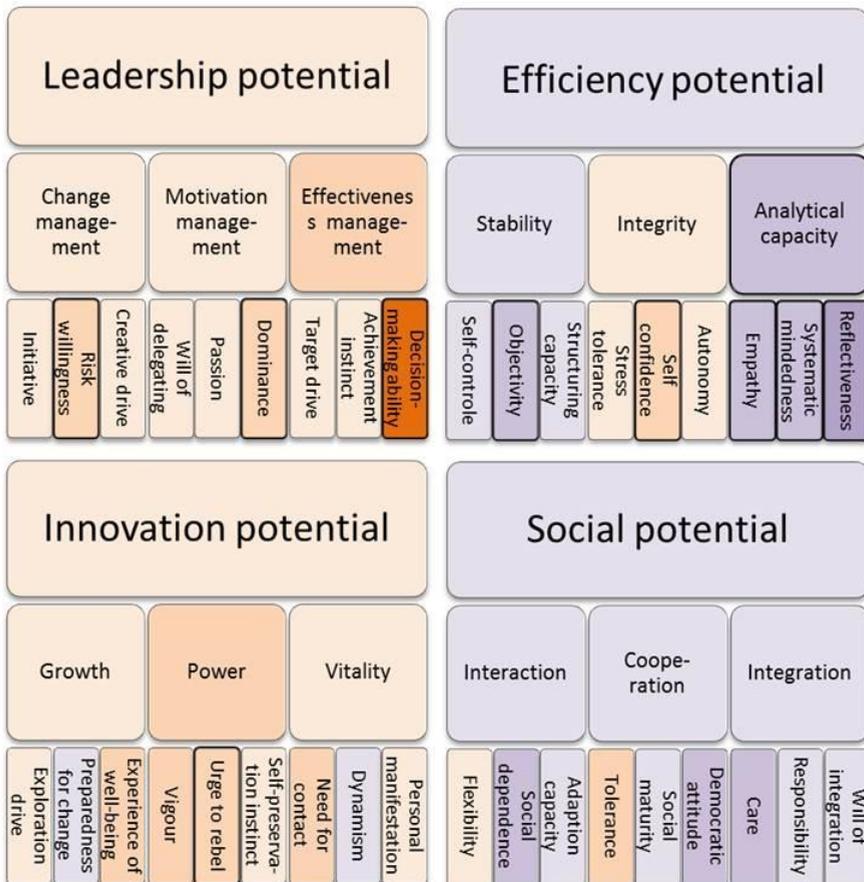


FIGURE 21 FACTOR SEVEN: THE REBEL. THE ØSTERGAARD SURVEY 2012

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The Rebel is an anti-authoritarian type who does not avoid confrontation and often bases decisions on emotions and impulsive reactions. Thus, the Rebel, with their large ego and low empathy, is always ready to take on new challenges without deep analysis but rather acting from a conviction that necessary steps have to be taken no matter the inevitable risks. The Rebel follows the slogan that “the end justifies the means”, but also the more innocuous “I will show them otherwise”.

All dummy scores are far below 50, which indicate an almost non-existent correspondence between the entrepreneurial type of the Rebel and the actual cohort.

5.2.8 FACTOR EIGHT – THE ADVENTURER

Factor Eight consists of 16 personality traits with a significant reliability coefficient (Cronbach’s Alpha = 0.9). Only one trait is negatively related: Self-control. The Exploration Drive scores were especially high, but there are also many other traits with relatively high scores.

| FACTOR EIGHT | Values > 0.3 |
|----------------------------|---------------|
| Exploration Drive | 0.803 |
| Preparedness for Change | 0.629 |
| Dynamism | 0.629 |
| Urge to Rebel | 0.614 |
| Initiative | 0.512 |
| Risk Willingness | 0.505 |
| Creative Drive | 0.494 |
| Vigour | 0.492 |
| Self-preservation Instinct | 0.393 |
| Achievement Instinct | 0.356 |
| Need for Contact | 0.344 |
| Passion | 0.318 |
| Self-Confidence | 0.318 |
| Dominance | 0.310 |
| Autonomy | 0.307 |
| Self-control | -0.559 |

TABLE 26 FACTOR EIGHT CONSISTING OF 16 PERSONALITY TRAITS |0.3|

The Adventurer is constantly looking for new experiences, new possibilities and new solutions with continuously rotating mental radar. The Adventurer is a curious and independent person who has a true interest in exploring the world and is not necessarily guided by a specific goal or a specific plan. The Adventurer is a passionate, dynamic and impulsive person who is able to cope with obstacles and carry through the necessary decisions.

The Adventurer is an entrepreneurial type with which almost half of the entrepreneur in the cohort corresponds, a total of 24 out of 55.

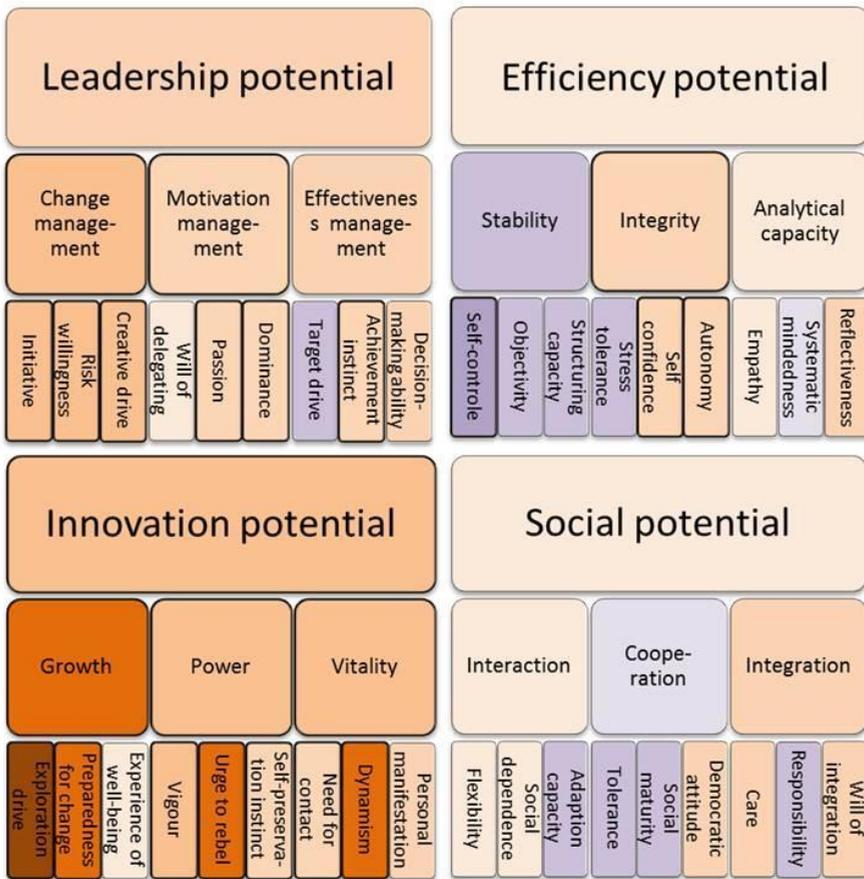


FIGURE 22 FACTOR EIGHT: THE ADVENTURER. THE ØSTERGAARD SURVEY 2012

5.2.9 FACTOR NINE – THE ROUTINIZED EMPLOYEE

Factor Nine consists of 16 negatively related personality traits as outlined in Table 27 with a significant reliability coefficient (Cronbach’s Alpha = 0.9). In other words, Factor Nine is the least or in almost opposition to of an entrepreneur in common sense supported by Thurstone’s thoughts of a baseline in factor analysis (1928).

The Routinized Employee is in a psychological interpretation a self-employed freelancer or entrepreneur, who works diligently to achieve an outcome from the everyday routines and tends to avoid risk. Curiosity, passion and vision are minimal. Furthermore, the Routinized Employee is characterised by a scarcity of mental power and self-confidence. Hence, the Routinized Employee is a controlled and self-organized person who is able to understand other people but who has no real interest in using this knowledge constructively in motivational processes or the like.

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| FACTOR NINE | Values > 0.3 |
|----------------------------|---------------|
| Creative Drive | -0.317 |
| Self-Confidence | -0.332 |
| Urge to Rebel | -0.393 |
| Will of Delegating | -0.405 |
| Care | -0.429 |
| Dynamism | -0.476 |
| Exploration Drive | -0.500 |
| Dominance | -0.559 |
| Passion | -0.636 |
| Personal Manifestation | -0.637 |
| Preparedness for Change | -0.649 |
| Initiative | -0.655 |
| Autonomy | -0.726 |
| Self-preservation Instinct | -0.753 |
| Vigour | -0.759 |
| Achievement Instinct | -0.867 |

TABLE 27 FACTOR NINE CONSISTING OF 16 PERSONALITY TRAITS |0.3|

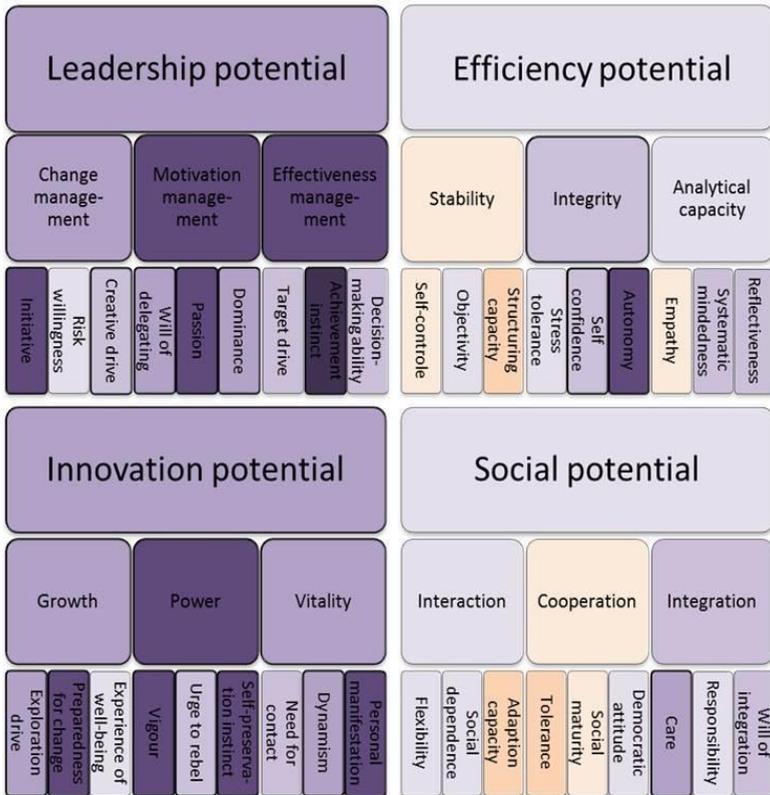


FIGURE 23 FACTOR NINE: THE ROUTINIZED EMPLOYEE. THE ØSTERGAARD SURVEY 2012

5.3 KNOWLEDGE DERIVED FROM THE FACTOR ANALYSIS

The factor analysis of personality traits outlines nine highly different entrepreneurial types derived from the entrepreneurial cohort: the Synnovation Creator, the Administrator, the Desperate Survivor, the Team Organizer, the Bag Carrier, the Opportunist, the Rebel, the Adventurer, and the Routinized Employee.

The entrepreneurial types are distributed to the highest level of differentiation between the types due to the eigenvalue in the factor analysis and are based upon the significant traits measured in the cohort's personality traits. Hence, the factor types outline significantly the entrepreneurial types characterised as the best and the worst or most or least, but more important the entrepreneurial types not only exist as opposing patterns on a baseline but also as diverse patterns from remote corners of the entrepreneurial landscape. These patterns are further processed in the following.

5.3.1 POSITIVELY VERSUS NEGATIVELY VALUED PERSONALITY TRAITS

According to Thurstone's (1928) factor baseline is the most significant entrepreneur Factor One. In fact, the factors One, Four and Eight, being the Synnovation Creator, the Team Organizer and the Adventurer respectively, have positive or mainly positive values indicating that these three relates directly to being an entrepreneurial type.

In opposition, the three factor types labelled Factor Three, Six and Nine, or respectively, the Desperate Survivor, the Opportunist and the Routinized Employee, with negative relationships to the entrepreneurial traits should be characterised as "non-entrepreneurial".

The last three factors, Two, Five and Seven, which are the Administrator, the Bag Carrier and the Rebel, have half positive and half negative values. However, the Administrator and the Bag Carrier have negative values on the seemingly highly important Leadership Potential personality traits and the Innovative Potential personality traits in relation to entrepreneurial activity. Consequently, these three factor types will be grouped with the "non-entrepreneurial" types.

Thus, the Rebel with positive values in Leadership Potential and Innovative Potential and negative values in Efficiency Potential and Social Potential is with the same argumentation characterised as an entrepreneurial type. Additionally, the highest correspondence between the types, described introductory in section 5.2, indicate a kind of relation concerning the Synnovation Creator, the Team Organizer, the Adventurer, and the Rebel.

All in all, based upon the positive and negative relationships of personality traits measured through a factor analysis, the main entrepreneurial types are seen as:

the Synnovation Creator (Factor One),

the Team Organizer (Factor Four),

the Rebel (Factor Seven), and

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the Adventurer (Factor Eight) as displayed assembled in Table 28.

| Relationship between Personality Potential and the four main Entrepreneurial Factors | | | | |
|--|------------------------------|---------------------------|-------------------|------------------------|
| Factor \ Potential | The Synnovation Creator(One) | The Team Organizer (Four) | The Rebel (Seven) | The Adventurer (Eight) |
| Leadership | Strong Positive | Positive/Negative | Strong Positive | Strong Positive |
| Innovation | Strong Positive | Positive/Negative | Strong Positive | Strong Positive |
| Efficiency | Negative/Positive | Strong Positive | Strong Neg/Pos | Positive/Negative |
| Social | Weak Positive | Strong Positive/Negative | Weak Negative | Positive/Negative |

TABLE 28 RELATIONSHIP BETWEEN ENTREPRENEURIAL FACTOR TYPES AND PERSONALITY POTENTIAL, THE ØSTERGAARD SURVEY, 2012

However, it is important to note that the negative values should be considered as the absence of entrepreneurial traits rather than opposing entrepreneurial traits. Hence, due to the high eigenvalue the Administrator exhibits, this type is interesting in the process of mapping the entrepreneurs. As previously discussed, the full picture of both high and low scores provides valuable information. In this case, the absent traits are informative.

The Administrator type scores high on the traits Objectivity, Structuring Capacity, Target Drive, Systematic Mindedness, Reflectiveness, Self-control, Empathy, Responsibility, and Will of Delegating. The absent traits, according to the perception of entrepreneurial strength, are Creative Drive, Risk Willingness, and Flexibility. The factor analysis suggests this type as the second dominant type, and as such, the psychological interpretation of the trait combinations suggests that the typical self-employed individual could be characterised by these traits. Self-employed individuals are not forced to be creative, flexible or to take a lot of risks. A self-employed person can run an independent business similar to hundreds of other self-employed people such as registered public accountants, hairdressers, greengrocers, architects, and consultants.

The personality of a self-employed (entrepreneur) characterised by the second factor type, the Administrator, is hereby argued to be homogenous but the subject of the business depends considerably on the diversity in upbringing, interests, education, environment, role models, life-changing events, and other external influences.

Of special concern is the Desperate Survivor who lacks every necessary quality of the typical entrepreneurial personality except or the Urge to Rebel, such as Stress

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Tolerance, Experience of Well-being, Self-control, Empathy, Self-confidence, Will of Integration, Target Drive, Passion, Democratic Attitude, Will of Delegating, and Social Maturity. Unless these types of entrepreneurs receive massive support, they will certainly fail due to the stabilization of this momentary weak stage. The weak moment of an entrepreneur is with this factor type described in its extreme; a more realistic picture would be that the entrepreneur over time (months and years) loses his/her self-confidence bit by bit due to mistakes and doubts. This impacts Target Drive, Passion, Stress Tolerance, Well-being, and Self-control. Another entrepreneur might have a low score on different traits, for instance lacking Empathy and Social Maturity, combined with a know-it-all attitude that leads to failure and thus impacting Well-being and Stress Tolerance.

Even though, a factor type only relates partly and not totally to a specific individual entrepreneur, the lesson of this factor type is of great value. Accordingly, the Desperate Survivor still possesses the fighting spirit but needs help, luck or changes to recover and develop towards one of the four main entrepreneurial types. If one is the black sheep, one can either break down or break out. Helpful support might ease that process in a positive direction.

5.3.2 THE FREQUENCY OF TRAITS IN RELATION TO THE FACTOR ANALYSIS

In the nine entrepreneurial types derived from the factor analysis, some traits occur more frequently than others. These traits are outlined in Table 29, with the traits which appear only once being omitted. Among the positive traits from all the types, one appears five times, six appear three times and several two times. The lacking traits with a negative value are added in the table as well. The traits with positive values and the traits with negative values are very similar in substance, supporting that the factor types characterise both entrepreneurial types and “non-entrepreneurial” types.

The most important traits in this comparison are Will of Delegating, Risk Willingness, and Self-confidence, followed by Creative Drive and Dominance. In expanding the analysis, the positive valued traits from the four main entrepreneurial types are added in order to control for relevance as entrepreneurial types. In fact, the similarities between the four main types and all the factor types are obvious. Consequently, the notion is that the four factor types the Synnovation Creator, the Team Organizer, the Rebel, and the Adventurer, are representative entrepreneurial types.

Hence, the essence of personality traits interpreted from the factor analysis and adhering to the entrepreneurial typology is clear. First, the Leadership Potential trait Will of Delegating tends to be a tremendous influence on the behaviour of an entrepreneur. The trait occurs five times as positively related. Simultaneously, it is the most frequent trait mentioned as lacking, and also the most frequent of the four main type characteristics of entrepreneurs. Second from all factor types and the four selected factor types, the traits Dominance, Passion, and Self-confidence are inevitable of entrepreneurs followed by the traits Achievement Instinct, Autonomy, Care, Dynamism, Exploration Drive, Initiative, Need for Contact, Personal Manifestation, Risk Willingness, Stress Tolerance, Urge to Rebel, and Vigour. Self-preservation Instinct and Creative Drive occur only one place.

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| Frequency of personality traits in the entrepreneurial factor types | | | | |
|---|--------------------|---------------------|--|---|
| Occur in factor types | 5 - | 4 - | 3 times | 2 times |
| All factors' Positive Traits | Will of delegating | | Dominance, Passion, Risk Willingness, Self-confidence, Structuring Capacity, and Urge to Rebel | Achievement Instinct, Autonomy, Care, Creative Drive, Dynamism, Empathy, Exploration Drive, Initiative, Need for Contact, Objectivity, Personal Manifestation, Reflectiveness, Responsibility, Stress Tolerance, Target Drive, and Vigour |
| All factors' Negative traits | | Will of Dele-gating | Creative Drive, Risk Willingness, and Self-confidence | Autonomy, Care, Dominance, Empathy, Initiative, Objectivity, Passion, Personal Manifestation, Reflectiveness, Self-control, Systematic Mindedness, Target Drive, and Vigour |
| Positive traits from Factor One, Four, Seven, and Eight | | Will of Dele-gating | Dominance, Passion, and Self-confidence | Achievement Instinct, Autonomy, Care, Dynamism, Exploration Drive, Initiative, Need for Contact, Personal Manifestation, Risk Willingness, Self-preservation Instinct, Stress Tolerance, Urge to Rebel, and Vigour |

TABLE 29 FREQUENCY OF PERSONALITY TRAITS IN ENTREPRENEURIAL TYPES, THE ØSTERGAARD SURVEY 2012

All in all, the dominating traits measured as frequency from the comparison of positively and negatively valued (the latter meaning lacking) traits to characterise an entrepreneur based upon the factor analysis of an entrepreneurial default typology are:

- Will of Delegating, and
- Self-confidence, followed by
- Dominance,
- Passion,
- Creative Drive, and
- Risk Willingness.

In more detail, the top six traits have an overlap with Factor One, the Synnovation Creator in three of the personality traits: Will of Delegating, Dominance, and Passion.

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In relation to Factor Four, the Team Organizer, the common trait is solely Passion. Factor Seven, the Rebel has also three traits in common with the top six trait analysis: Risk Willingness, Dominance, and Self-confidence. Finally, Factor Eight, the Adventurer shares the traits Risk Willingness and Creative Drive.

Consequently, The Synnovation Creator and The Rebel relate mostly to an entrepreneur by default according to the psychological analysis of the factor types using frequency of personality traits. In addition, this analysis argues for leadership as an important part, even more than innovation since the three traits Will of Delegating, Passion and Dominance represent Motivation Management in the Leadership Potential. Risk Willingness and Creative Drive fall under Change Management, which is also a part of the Leadership Potential. Self-confidence is the only trait outside Leadership Potential, and it belongs to Integrity as part of Potential for Effectiveness (see 4.2.3.1 for further information).

5.4 THE FOCAL POINTS OF PERSONALITY

In a historical perspective, outdated measurement tools impacted the muddiness of the concept of personality and opposite development of the personality concept suffers from inadequate measurements and the scarcity of clear definitions and agreement around the entrepreneurial personality (Davidsson, 2005; 2008; Gartner, 1988).

Consequently, these topics are addressed continuously in this research, among others with a renewed definition of personality (see Definition 1) that involves thoughts, perceptions and behaviour from which a relationship can be recognized and predicted.

Optimally, the scientific framework of an entrepreneur embraces the individual entrepreneurs' package of personality, cognitive abilities, and physical condition surrounded by the developing social and environmental influences that appear over a life span. Moreover, the used measurement methods should include current suitable personality traits, avoiding, for instance, neuroticism and outlining the full personality profile in finding the basis of the entrepreneurial personality.

Consequently, this survey addresses the scientific framework with theoretical developments and the methodological challenges by using pattern explanation of the personality trait combinations employing for instance factor analysis instead of single trait analysis.

Hence, the factor analysis of personality traits outlines nine highly differentiated entrepreneurial types derived from the entrepreneurial cohort through a psychological analysis, which are assembled in the following definitions.

DEFINITION 3 OF FACTOR ONE – THE SYNNOVATION CREATOR

The Synnovation Creator is characterised by a remarkable drive and interest in the innovation process as a social activity designed and managed by the entrepreneur. The Synnovation Creator is aware of the importance of group processes and the synergetic power inherent in the dedicated group members.

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Thus, the Synnovation Creator stimulates employees or other human resources committed to the innovation goal with lots of attention, care and motivational effort.

DEFINITION 4 OF FACTOR TWO – THE ADMINISTRATOR

The Administrator is characterised by a very high personal stability, a social responsibility, systematic mindedness, and a preference for order, target retaining and following “business as usual”. The Administrator avoids risk taking and creative activity.

DEFINITION 5 OF FACTOR THREE – THE DESPERATE SURVIVOR

The Desperate Survivor is a disillusioned, frustrated and mentally injured person who struggles with a code of practice advocating for new ideas and inventions. The Desperate Survivor still retains traces of a dynamic and rebellious behaviour in the personality, which indicates a weak option of being a fighter or the entrepreneurial recipe of coping in critical conditions. The Desperate Survivor is a vulnerable and insulating individual with a low stress tolerance, low self-control and no interest in social obligations.

DEFINITION 6 OF FACTOR FOUR – THE TEAM ORGANIZER

The Team Organizer feels morally committed to improving the world socially, preferable by following a program or a script instead of adapting via flexibility and tolerance. The Team Organizer is characterised by a passion for the purpose, high empathy and a high structuring capacity. The motivational drivers are visible measurable results from one’s own effort as well as dedicated efficiency and reliability in the team.

DEFINITION 7 OF FACTOR FIVE – THE BAG CARRIER

The Bag Carrier is a deeply socially dependent individual adhering to the opinions and ideas of influential people, and who constantly fits and adapts to the current social environment. This focus on adaptation is the life goal of The Bag Carrier due to the absence of self-confidence, decision-making, risk taking and the will to fight for one’s own survival. The Bag Carrier finds it obvious to obtain success through a submissive and conforming collaboration with the most powerful authorities.

DEFINITION 8 OF FACTOR SIX – THE OPPORTUNIST

The Opportunist is characterised by a high degree of tolerance and flexibility accompanied by an inclination to take risks and find new solutions while overcoming obstacles. At the same time, the Opportunist takes no interest in personal involvement, care or responsible commitment towards others. The results of the Opportunist’s actions are primarily coincidental due to an unengaged and unpretentious target setting.

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DEFINITION 9 OF FACTOR SEVEN – THE REBEL

The Rebel is an anti-authoritarian type who does not avoid confrontation and often bases decisions on emotions and impulsive reactions. Thus, the Rebel with their large ego and low empathy is always ready to take on new challenges without prior reflections but rather acting from a conviction that necessary steps have to be taken no matter the inevitable risks. The Rebel follows the motto that “the end justifies the means” besides the more innocuous “I will show them otherwise”.

DEFINITION 10 OF FACTOR EIGHT – THE ADVENTURER

The Adventurer is constantly looking for new experiences, new possibilities and new solutions with a continuously rotating mental radar. The Adventurer is a curious and independent person who has a true interest in exploring the world, but whose choices are not necessarily determined by a specific goal or a specific plan. The Adventurer is a passionate, dynamic and impulsive person who is able to cope with obstacles and carry through the necessary decisions.

DEFINITION 11 OF FACTOR NINE – THE ROUTINIZED EMPLOYEE

The Routinized Employee works diligently to achieve an outcome from the everyday routines and tends to avoid risk. Curiosity, passions and visions are all kept to a minimum level. Moreover, the Routinized Employee is characterised by a scarcity of mental power and self-confidence. Hence, the Routinized Employee is a controlled and self-organized person who is able to understand other people but with no real interest in using this knowledge constructively in motivational processes or the like.

Thus, a principal axes factoring combined with a factor correlation matrix and a structure matrix of the nine factors and the 36 personality traits outline distinct and diverse entrepreneurial profiles based on innate personality traits. The diversity of the entrepreneurial profiles, however, is further discussed in Chapter 7 and 8.

Clearly, it is time to follow Hisrich Langan-Fox and Grant’s (2007) call to action for the use of psychology to fill in the gaps in the entrepreneur literature. Hence, the empirical research also undertakes the first key topics of Hisrich et al: the personality characteristics of entrepreneurs, including the dark side. However, the notion is that psychopathology is not a specific personality characteristic of entrepreneurs, but rather are weak social competences in general reckoned to be an entrepreneurial characteristic.

With the purpose of determining the uniqueness of an entrepreneur in order to answer the research question “*What is the psychological core of the entrepreneurial personality?*”, the empirical evidence justifies the theoretically developed core set of the entrepreneurial personality consisting of four personality traits: Autonomy, Exploration Drive, Preparedness for Change, and Self-preservation Instinct (see

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Definition 2). The next step is to determine how the diversity in the factor types impacts on the core personality. Advantageously, the theoretically defined core entrepreneur happens to be in accordance with the factor type with the highest eigenvalue: the Synnovation Creator.

The psychological analysis also displays that an entrepreneurial default typology personality consists of the following six positively related traits: Will of Delegating, Risk Willingness, Dominance, Passion, Self-confidence and Creative Drive. Thereby, the need for an additional investigation into the traits and their belonging to the entrepreneurial types is predictable. Hence, the personality traits are carefully investigated in Chapter 7 and 8 in order to categorise the entrepreneurs and with the purpose of developing the theoretical framing.

Remarkably, a comparison between novice entrepreneurs and established entrepreneurs reveals that entrepreneurs first and foremost are vulnerable in regard to their personal welfare. Thus, the young people managed challenges with Passion and Urge to Rebel, and the experienced entrepreneurs used Vigour as the specific entrepreneurial coping behaviour.

Hence, the findings outline a rich entrepreneurial coping strategy from which to learn, especially as cognitive training of crisis-stricken entrepreneurs and individuals with stress, depression and the like. Apparently, the entrepreneurial coping battery consists of the traits Personal Manifestation, Preparedness for Change, Risk Willingness, Achievement Instinct, and for younger entrepreneurs primarily Passion and Urge to Rebel and for mature entrepreneurs Vigour.

All in all, due to the positive and negative relationships of personality traits measured through a factor analysis, the entrepreneurial types by default are: the Synnovation Creator (Factor One) and the Team Organizer (Factor Four) as the well-functioning entrepreneurs, and the Rebel (Factor Seven) and the Adventurer (Factor Eight) as possessing entrepreneurial potential.

In fact, the findings argue for additional empirical reflections in relation to the diversity of the nine factor types of entrepreneurs, whereas the self-employed differs significantly from an ordinary perception of an entrepreneur. However, by using a psychological lens the discussion whether an entrepreneur is born or made becomes irrelevant since both born *and* made related issues are in play to describe the entrepreneurial personality in full.

On the other hand, the six principal traits of an entrepreneur gleaned from the factor analysis argue for the strength of leadership skills among genuine entrepreneurs. Hence, the importance of leadership, which apparently differs among the entrepreneurial factor types, is the subject for discussion in the next chapter.

CHAPTER 6. ENTREPRENEURIAL LEADERSHIP PREFERENCES

“To Venture Causes Anxiety, But Not to Venture Is to Lose One's Self. And to Venture in the Highest Is Precisely to Be Conscious of One's Self.”

Søren A. Kierkegaard

The empirical leadership data are emphasised throughout this chapter as an explorative study of the basic results addressing the research sub-question “*What is the relationship between leadership and entrepreneurial personality?*” by a detailed description of the entrepreneurial leader’s behaviour, and the entrepreneurs’ preferred style of goal-setting and problem-solving. Furthermore, the results verify the leadership theory, and the assumed inevitable correspondence between entrepreneurs and leadership is supported. Multiple minor findings are outlined in the chapter concurrently, and only the main findings are repeated in the conclusion.

In continuation of the personality chapter that demonstrated how a self-employed individual differs from an entrepreneur, this chapter demonstrates the differentiation between an entrepreneur and a business owner. Additionally, the chapter outlines the essential factors of the entrepreneurial leadership personality supporting the concept of the entrepreneurial leader.

6.1 EMPIRICAL KNOWLEDGE FROM THE LEADERSHIP TEST RESULTS

In this section, the leadership scores are analysed in various ways. The distribution of the preferred leadership roles, the score value and the amount of combinations are the most interesting results to investigate in regard of entrepreneurial leadership characteristics. However, the reliability of the 27 leadership roles is dependent on the nine coding variables and their reliability. Hence, the reliability is confirmed by a Cronbach's alpha of 0.886, including all nine leadership role factors.

The leadership preference test, JOE’s test has 27 leadership roles (see section 4.2.3.2) are distributed into three categories of behaviour: goal-setting behaviour, communicating behaviour and problem-solving behaviour. Concurrently, the roles are distributed at three levels of behaviour: operating behaviour; adaptive (more tactical) behaviour; and developmental strategic behaviour. Abbreviations for the coding will be used to make descriptions more tangible. The Goal-setting behaviour abbreviations OG, AG, DG are the coding explaining Operations control goal-setting, Adaptive goal-setting, and Developmental goal-setting, respectively. The Communicating behaviour uses the abbreviations DC, PC, and SC as the coding explaining Decision communication, Person-oriented communication, and Systems communication.

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Lastly, the Problem-solving behaviour is explained by the abbreviations SP, IP, and EP being the coding of Systematic problem-solving, Interactive problem-solving, and Experimental problem-solving, respectively (see Figure 8).

Below, an overview is provided of the preferred leadership roles when taking into account all roles regardless of value, the median score in each leadership role and the number of respondents with the leadership role as the first preferred with the highest possible score, likewise the second and the third preferred leadership role with the second and third highest score. More importantly, Table 30 outlines the measured prioritizing, which is not comparable to a simpler self-score indicator.

| The entrepreneurial preferred leadership roles revealed from active entrepreneurial respondents | | | | | |
|--|----------|----------|---------------|----------------|---------------|
| Leadership Role | R-scores | Median | First role | Second role | Third role |
| 1. The Administrator Role | 10 | 41.90000 | 4 | 4 | 0 |
| 2. The Diagnostician Role | 3 | 38.00000 | 2 | 0 | 0 |
| 3. The Systems Constructor Role | 2 | 34.50000 | 1 | 0 | 0 |
| 4. The Group Leader Role | 6 | 36.33333 | 0 | 2 | 1 |
| 5. The Sparring Partner Role | 4 | 36.25000 | 0 | 1 | 1 |
| 6. The Meeting Conductor Role | 3 | 36.33333 | 0 | 1 | 0 |
| 7. The Controller Role | 6 | 35.66667 | 0 | 2 | 1 |
| 8. The Arbitrator Role | 4 | 35.25000 | 0 | 0 | 2 |
| 9. The Experimenter Role | 3 | 33.33333 | 0 | 1 | 0 |
| 10. The Coordinator Role | 15 | 39.33333 | 5 | 4 | 1 |
| 11. The Process Tactician Role | 10 | 35.80000 | 1 | 2 | 2 |
| 12. The Reorganiser Role | 6 | 35.83333 | 1 | 2 | 0 |
| 13. The Politician Role | 9 | 35.77778 | 1 | 3 | 1 |
| 14. The Process Consultant Role | 11 | 36.90909 | 3 | 2 | 0 |
| 15. The Stakeholder Consultant | 8 | 36.62500 | 0 | 2 | 2 |
| 16. The Idea Creator Role | 16 | 39.75000 | 7 | 2 | 3 |
| 17. The Environment Creator | 14 | 35.57143 | 3 | 1 | 1 |
| 18. The Teacher Role | 13 | 37.38462 | 0 | 4 | 2 |
| 19. The Strategic Planner | 13 | 37.00000 | 2 | 4 | 1 |
| 20. The Stakeholder Analyst | 11 | 36.45455 | 1 | 3 | 2 |
| 21. The Philosopher | 10 | 36.90000 | 3 | 4 | 1 |
| 22. The Organiser Role | 11 | 36.63636 | 2 | 0 | 2 |
| 23. The Learner Role | 13 | 37.61538 | 1 | 5 | 3 |
| 24. The Communicator Role | 12 | 39.41667 | 6 | 1 | 2 |
| 25. The Entrepreneur Role | 21 | 41.09524 | 7 | 5 | 4 |
| 26. The Strategist Role | 17 | 37.76471 | 3 | 5 | 3 |
| 27. The Statesman Role | 20 | 40.45000 | 8 | 4 | 5 |

TABLE 30 PREFERRED LEADERSHIP ROLES OF ENTREPRENEURS, THE ØSTERGAARD SURVEY 2012

Beforehand, the leadership raw scores of the 46 active entrepreneurs have been transformed into leadership roles through coding. The preferred leadership role consists optimally of one preferred goal-setting behaviour out of three, one preferred

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communication behaviour out of three, and one preferred problem-solving behaviour out of three possible. Thereby, the preferred leadership role is one out of three cubed possible. Moreover, the preferred role function as a default leadership behaviour in, for instance, urgent situations and requires conscious choices in order to behave different. However, in cases with equal high scores, the number of preferred leadership roles increases from one to two or more.

Surprisingly positive, the overall preferred leadership role is Number 25, the Entrepreneur Role with the valued mean score of 41.1 from 21 respondent scores. Hereby, the leadership theory of Johnsen (e.g. 2002) proved validity in relation to the leadership test JOE, and vice versa.

Also surprising, the highest mean is seen with a very strong preference of 10 respondents for Number 1, The Administrator role and four of them with the Administrator as first preferred. Thereby, the cohort contains four entrepreneurial individuals, who prefer to function as an administrator more than as an entrepreneur. Still, 21 respondents prefer the Entrepreneur Role, and 20 respondents prefer Number 27, the Statesman with the third highest mean.

In continuation, a look at the first preferred role in Table 30 reveals that Number 27, the Statesman Role was the most preferred with 8 scores in this cohort followed by Number 25, the Entrepreneur Role, together with Number 16, the Idea Creator Role, with 7 scores each. Thus, the coding of these roles makes it clear that the combination of developmental goal-setting (DG) and experimental problem-solving (EP) is substantially connected in relation to entrepreneurs. Besides, adaptive goal-setting and different communication styles also matters among entrepreneurs.

Regarding the first prioritized leadership roles of the respondents, the pattern outlines either a single certain role preference, or double with equal scores and less certain. The differentiation of the scores ranges from 36 being weak to 53 indicating high strength of the affiliation towards the role.

Additionally, leadership roles with coding combination of OG-IP and OG-EP are lacking, indicating that the combination of operating goal-setting together with interactive problem-solving and experimental problem-solving is irrelevant for these entrepreneurs. Moreover, the respondents seldom combine operating goal-setting with any other sort of problem-solving other than systematic problem-solving, but the likelihood of entrepreneurial individuals combining these is practically nil.

6.2 SUCCESSFUL ENTREPRENEURIAL LEADERSHIP

The ideal objective would be finding the crucial factors of fulfilling being an entrepreneur capable to endeavour. Hence, successful entrepreneurial leadership is considered to be a prosper avenue to fulfil the entrepreneurial leader role and endeavour as a (successful) entrepreneur. Following this thought, the leadership scores are further analysed and explored in this section to identify the specific entrepreneurial nature in relation to leadership.

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As opposed to an investigation of list results, this research explores the leadership preference results from an expectation of certain outcomes and also from specific limitations. The exploration is conducted through phases with sorting, where some results are selected for continuation and others neglected in the further exploration. In the end, the exploration results outline standards, examples or cases to learn from, and in the best cases to generalise from.

Consequently, the chapter's point of departure is the investigation of the respondent scores primarily in relation to the leadership role number 25, the Entrepreneur Role with the coding: DG – DC - EP. This role is unavoidable since a successful entrepreneur needs leadership knowledge to run a business; in a one-man business to manage daily business tasks, and in a Small and Medium sized Enterprise to handle different employees. The expectation is to find a preference for the leadership role Number 25, the Entrepreneur Role in a current or a future successful individual entrepreneur.

Hence, the respective relevant respondents will be explored and discussed in relation to the entrepreneurial leader role as the preferred role, the importance of value in the scores, the bearing of the coding content, the influence of growth programs, and the relevance of strategy. Along the way, the selection of relevant respondents and a triangulation with background data and specific leadership skills from the questionnaire enhances the points of successful endeavour for entrepreneurs preferring the Entrepreneur Role.

6.2.1 LEADERSHIP PREFERENCE OF ENTREPRENEURS IS ENTREPRENEURIAL

The first search for an ideal entrepreneur focus on the leadership role number 25, the Entrepreneur Role. The outcome regarding the “first preference” as the highest score for each individual reveal that the entrepreneur leadership role was preferred by seven respondents: R13, R16, R23, R37, R46, R47 and R54.

| The primary entrepreneurial leaders | | | | | | | |
|-------------------------------------|-------|-------|-----|-------|-------|-----|-------|
| R* Coding | R13 | R16 | R23 | R37 | R46 | R47 | R54 |
| OG | 6 | 6 | 4 | 1 | 8 | 3 | 4 |
| AG | 12 | 7 | 9 | 7 | 4 | 11 | 12 |
| DG | 12 | 17 | 17 | 22 | 18 | 16 | 14 |
| DC | 17 | 12 | 11 | 11 | 12 | 18 | 11 |
| PC | 6 | 10 | 10 | 8 | 6 | 5 | 8 |
| SC | 7 | 8 | 9 | 11 | 12 | 7 | 11 |
| SP | 11 | 6 | 7 | 7 | 9 | 7 | 2 |
| IP | 5 | 12 | 6 | 3 | 7 | 4 | 3 |
| EP | 14 | 12 | 17 | 20 | 14 | 19 | 25 |
| 1.role | 25/16 | 22/25 | 25 | 25/27 | 25/27 | 25 | 25/27 |
| Score | 43 | 41 | 45 | 53 | 44 | 53 | 50 |

TABLE 31 RESPONDENTS WITH THE ENTREPRENEUR ROLE IN LEADERSHIP AS PRIMARY ROLE, THE ØSTERGAARD SURVEY 2012

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The Entrepreneur Leadership Role (marked with grey in Developmental Goal-setting, Decision Communication and Experimental Problem-solving) was a unique choice for two respondents and a double role for five respondents, where the most frequent doublet was role number 27, the Statesman Role. Role number 16, the Idea Creator Role and number 22, the Organiser Role was a doublet in one case. Moreover, the seven respondents show a high average score (47) in the entrepreneurial role, indicating a solid choice of preferred behaviour related to the entrepreneurial role. Thus, these seven respondents are at this stage presumably high-performing entrepreneurial leaders.

Beside the seven, five selected the Entrepreneur Leadership Role as the second choice and nine as the third. One respondent has only one choice but double roles with a score on 53, and nine have only two choices. All in all, 21 entrepreneurs out of 46, who completed the leadership test, used developmental goal-setting, decision communication and experimental problem-solving as a leadership style: R01, R08, R13, R16, R22, R23, R24, R29, R31, R34, R36, R37, R39, R41, R42, R43, R44, R46, R47, R54, and R55. Almost half of the respondents, but not all, relate to the leadership role labelled “the entrepreneur”.

6.2.2 SCORE VALUES DISPLAY THE STRENGTH OF LEADER BEHAVIOUR

The value of the score describes the intensity of the leadership behaviour. Many diffused roles relate to lower scores, whereas few certain preferences relate to high scores. Hence, the score is measuring the weight, strength and force of the individual's leadership power in the specific role. Thereby, the score measures the entrepreneur's ability to fulfil the task (reach the goal and solve the problems) and endeavour as a successful entrepreneurial leader.

In general, the average score is 41.61 for a leadership role in this survey, where the average score of the first preferred leadership role is 43.42. The highest score for the first preferred leadership role is 53 and the lowest is 35.

Essentially, the coding from raw scores to the preferred leadership role operates with the highest score in each of the three behaviour categories: Goal-setting, Communication and Problem-solving. The score in each category range between the minimum score 0 and maximum score 30, where 10 is an absolute average in the three possible choices in each category. With an acceptable margin for error of 10 percent, then 9 is the lowest acceptable leadership score of interest. Hence, a leadership role score of 35 indicates almost an average leadership role which is suffering from the passionate, outstanding or successful leadership behaviour. In conclusion, a role score of at least 40 is chosen as necessary to find the respondents with significant strength in the entrepreneurial leadership behaviour.

Nine respondents have high scores on or above 40 on role number 25 as first or second preference: R13, R16, R23, R36, R37, R42, R46, R47 and R54 as outlined in Table 32. In addition, the respondent's affiliation is included and by coincidence, the distribution demonstrates homogeneity in numbers; the first three respondents are situated in Incubation Park I, the next three in Incubation Park II and the last three

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respondents are selected and invited to be part of the regional business boost project for prospective entrepreneurs. Likewise, the average score on the Entrepreneur Role (Number 25) is for Incubation Park I 43, 50 for Incubation Park II, and for the specially selected potential growth entrepreneurs the average score is 49 in the first role preference.

| The distinct Entrepreneurial Leaders | | | | | | | | | |
|--------------------------------------|-----------|-----------|-----|-----------|-----------|-----|-----------|-----|-----------|
| CODING | R13 | R16 | R23 | R36 | R37 | R42 | R46 | R47 | R54 |
| OG | 6 | 6 | 4 | 2 | 1 | 7 | 8 | 3 | 4 |
| AG | 12 | 7 | 9 | 12 | 7 | 12 | 4 | 11 | 12 |
| DG | 12 | 17 | 17 | 16 | 22 | 11 | 18 | 16 | 14 |
| DC | 17 | 12 | 11 | 9 | 11 | 21 | 12 | 18 | 11 |
| PC | 6 | 10 | 10 | 8 | 8 | 6 | 6 | 5 | 8 |
| SC | 7 | 8 | 9 | 13 | 11 | 3 | 12 | 7 | 11 |
| SP | 11 | 6 | 7 | 5 | 7 | 5 | 9 | 7 | 2 |
| IP | 5 | 12 | 6 | 7 | 3 | 9 | 7 | 4 | 3 |
| EP | 14 | 12 | 17 | 18 | 20 | 16 | 14 | 19 | 25 |
| 1.role | 25/ 16 | 22/ 25 | 25 | 27 | 25/ 27 | 16 | 25/ 27 | 25 | 25/27 |
| Score | 43 | 41 | 45 | 47 | 53 | 49 | 44 | 53 | 50 |
| 2.role | 10/ 19 | 23/ 26 | 26 | 18/ 25 | | 25 | 19/ 21 | 16 | 16/ 18 |
| Score | 40 | 39 | 44 | 43 | | 48 | 39 | 48 | 48 |
| Affiliation | I | I | I | II | II | II | III | III | III |

TABLE 32 THE DISTINCT ENTREPRENEUR ROLE WITH AFFILIATION, THE ØSTERGAARD SURVEY 2012

In conclusion, the difference is not significant between entrepreneurs situated in an ordinary incubation park and promising entrepreneurs participating in growth programs as it might be assumed. However, a number of the entrepreneurs possess distinct entrepreneurial leadership behaviour.

6.2.3 STRATEGIST BEHAVIOUR SUITS FRONT EDGE ENTREPRENEURS

With the purpose of outlining the criteria for successful entrepreneurs found from the leadership role preference, the previous focus on leadership role number 25 is amended with leadership role number 26, the Strategist Role and number 27, the Statesman Role.

Moreover, the significant coding pattern with development goal-setting and explorative problem-solving is shared by Number 25, the Entrepreneur Role (DG-DC-EP), Number 26, the Strategist Role (DG-PC-EP) and Number 27, the Statesman Role (DG-SC-EP). The only differentiation is that the communication style differs from decision communication over personal to systemic communication.

The respondents with at least two of the three roles as first, second or third prioritized role are selected. Hereby, the added respondents with strategic preferences are: R01, R08, R09, R22, and R44, where the lacking respondents from the previous analysis are R13, R42, and R47 as outlined in Table 33. Besides, the affiliation is skewed

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towards Incubation Park I with six respondents, three from II, and two potential growth entrepreneurs.

| Entrepreneurial Leaders with strategic skills | | | | | | | | | | | |
|---|----|-----------|-----------|-----------|-----------|----|-----------|-----------|-------|-----------|-----------|
| CODING | 01 | 08 | 09 | 16 | 22 | 23 | 36 | 37 | 44 | 46 | 54 |
| OG | 4 | 9 | 4 | 6 | 8 | 4 | 2 | 1 | 3 | 8 | 4 |
| AG | 9 | 11 | 8 | 7 | 7 | 9 | 12 | 7 | 9 | 4 | 12 |
| DG | 17 | 10 | 18 | 17 | 15 | 17 | 16 | 22 | 18 | 18 | 14 |
| DC | 9 | 14 | 6 | 12 | 9 | 11 | 9 | 11 | 9 | 12 | 11 |
| PC | 10 | 13 | 12 | 10 | 12 | 10 | 8 | 8 | 11 | 6 | 8 |
| SC | 11 | 3 | 12 | 8 | 9 | 9 | 13 | 11 | 10 | 12 | 11 |
| SP | 6 | 6 | 9 | 6 | 9 | 7 | 5 | 7 | 6 | 9 | 2 |
| IP | 8 | 7 | 7 | 12 | 8 | 6 | 7 | 3 | 11 | 7 | 3 |
| EP | 16 | 17 | 14 | 12 | 13 | 17 | 18 | 20 | 13 | 14 | 25 |
| 1.role | 27 | 16 | 26/ 27 | 22/ 25 | 26 | 25 | 27 | 25/ 27 | 26 | 25/ 27 | 25/27 |
| Score | 44 | 42 | 44 | 41 | 40 | 45 | 47 | 53 | 42 | 44 | 50 |
| 2.role | 26 | 17/ 25 | | 23/ 26 | 25/ 27 | 26 | 18/ 25 | | 27 | 19/ 21 | 16/ 18 |
| Score | 43 | 41 | | 39 | 37 | 44 | 43 | | 41 | 39 | 48 |
| 3.role | 25 | 26 | | | | 27 | | | 25/23 | | |
| Score | 42 | 40 | | | | 43 | | | 40 | | |
| Affiliation | I | I | I | I | I | I | II | II | II | III | III |

TABLE 33 THE POTENTIAL SUCCESSFUL ENTREPRENEURIAL LEADERS WITH AFFILIATION, THE ØSTERGAARD SURVEY 2012

Based on role combinations, the strongest respondent is: R22, followed by R44, R23, R01, R09, R46, R37, R54, R16, R08 and R36. In reality, however, it is diffuse whether “strong” correspond to the number of employees, the years of existence, the revenue, the return on investments, the number of revivals after bankruptcy, or a mix. R22 is a self-employed web developer: pragmatic, all-round, and experienced.

The Strategist Role is added to in the analysis due to the assumption that a successful entrepreneur needs strategy to be ahead of competitors and concurrently develop their continuous ideas, which are often five to 10 years ahead of the market. Generally, the strong and solid entrepreneur must place activities and allocate resources in the right time and sequence to target the customers.

The Statesman Role is second because of the systemic language, which limits the natural environment in which the entrepreneur behaves; however, the advantage is the internal overview of organisations and large companies.

Hence, the Strategist Role is emphasised in combination with the Entrepreneur Role and the Statesman Role as a guarantor of interaction among the roles. Most probably, an entrepreneur benefits from varying, as required, between the three roles focusing on the entrepreneur and secondly, at the strategist leadership behaviour.

6.2.4 BACKGROUND DATA AND EMPIRICAL FACTS

In terms of enhancing knowledge, the leadership analyses are triangulated by facts from the questionnaire. However, R37 did not accomplish the questionnaire. Hence, the final dataset to outline the potentially successful entrepreneurial leaders consists of R01, R08, R09, R16, R22, R23, R36, R44, R46, and R54 possessing the entrepreneur role with high values and the strategist preferences. In addition, R13, R42, and R47 from the previous analyses took part due to their very distinct entrepreneurial preferences. The data of the 13 respondents are analysed to find the essential factors at the intersection of entrepreneurship and leadership of individuals.

The first overview of the selected thirteen potential successful entrepreneurs reveals one female, presumably due to the small number of female participants in the survey; nine are married and all, apart from one, have children; the youngest entrepreneur was born in 1982 and the oldest in 1959; and the typical level of education is a medium length of higher education, but nine of the thirteen have a higher education.

The educational distribution among the potential successful entrepreneurs is similar to the pattern from all 41 respondents from the questionnaire. Hence, the educational background in itself is not a predictor of being successful as an entrepreneur, even higher education (HE) corresponds with growth entrepreneurs (Dahl et al., 2009).

An analysis of the educational background of the respondents in relation to the preference for strategic, tactical or operational leadership revealed that the length of education in this cohort determines the preference for managing at a strategic level. The respondents with a higher education had an almost doubled preference for strategic leadership compared to the respondents without HE. Thus, the respondents with less or no education preferred an operational level of leadership.

In contrast, the respondents with a vocational education or a basic vocational education followed their own path with interest in all three levels of leadership.

Next in line, coherence between experience and preferences is met in the analysis, but not as expected. The expected coherence was equivalence among entrepreneurs with preference for strategic level of leadership in relation to several chairman positions, long leader experiences, many employees and furthermore long lasting single companies based on one radical invention long ago without bankruptcies and hostile acquisitions.

On the contrary, the results indicate a relative enormous diversification as outlined in the Table 34 and Table 35 with leadership factors and enterprise factors of the selected respondents, respectively.

Opening, the distribution of preferred leadership level indicates that the individual's preference does not necessarily relate causal to factors such as experience or number of employees. In reverse, the preference of working with leadership at an operational, tactical or strategic level could be explained by the original interest of these respondents.

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Hence, the choice as to whether or not having employees would then be explained by the interest and ability to manage at a specific level. For instance, respondent 09 has no interest in having employees: "I have been self-employed for 15 years with no employees."

| Leadership factors of the selected respondents | | | | | |
|--|--------------------------------------|---------------------------|-------------------|---|--|
| Respondents | Leader level | Leader experience (Years) | Current employees | Current board positions (Chairman) Length | Previous board positions (Chairman) Length |
| R 01 | Operational Tactical Strategic | 2 | 2 | 0 | 0 |
| R 08 | Operational Tactical Strategic | 12 | 60 | 1 - 10 years | |
| R 09 | Operational Tactical Strategic | 2 | 0 | 1 - 1 year | 3 (2) 7 years |
| R 13 | Operational | 1 | 1 | 1 (1) 8 years | 0 |
| R 16 | Operational Tactical Strategic | 7 | 3 | 0 | 1 |
| R 22 | Operational Tactical Strategic | 4 | 0 | 0 | 1 (1) 3 years |
| R 23 | Strategic | 5 | 16 | 5-4 years (1) 1 year | 0 |
| R 36 | None | 0 | 0 | | |
| R 42 | Operational Tactical Strategic | 10 | 3 | 3 (1) 5 years | 1 (1) 3 years |
| R 44 | Operational Tactical Strategic | 5 | 1 | 4 (0) 4 years | 1 - 10 years (1) 2 years |
| R 46 | Operational | 19 | 5 | 2 (2) 15 years | 1 (1) 4 years |
| R 47 | Strategic | 2 | 2 | 0 | 0 |
| R 54 | Operational Tactical Strategic | 20 | 1 | 1 (1) 10 years | 2 - 10 years |

TABLE 34 LEADERSHIP FACTORS OF SELECTED RESPONDENTS, THE ØSTERGAARD SURVEY 2012

However, there is a difference concerning entrepreneurs and employees; an employed specialist often advances as a middle leader, but entrepreneurial advancement depends on the firm's growth, field and subjects as well as the interest of the entrepreneur in having employees, and how many.

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An increasing pattern among entrepreneurs is to exchange ordinary employers for freelancers or to create topic-related ties with colleagues and send invoices to each other for appointed contracts.

Table 35 outlines the firm history of the selected thirteen entrepreneurial respondents:

| Entrepreneurial enterprise factors | | | | | | | | |
|------------------------------------|--------------------|------------------------|-------------|--------------|--------------|-----------------------|-------------|--|
| R * | Year of first firm | Owner & co-owner firms | Firm launch | Bankruptcies | Closed firms | Mergers/ Acquisitions | Name shifts | a) Inventions b) Patents c) Trademarks |
| 01 | 2011 | 1 | 3 | 0 | 0 | 0 | 0 | a) 25 b) 0 c) 1 |
| 08 | 2001 | 3 | 3 | 1 | 1 | 3 | 2 | |
| 09 | 1997 | 1 | 1 | 0 | 0 | 0 | 0 | d) 25 e) 0 f) 0 |
| 13 | 2004 | 1 | 1 | 0 | 0 | 0 | 0 | a) 10 b) 0 c) 0 |
| 16 | 2006 | 1 | 1 | 0 | 0 | 0 | 1 | |
| 22 | 2000 | 2 | 2 | 0 | 0 | 0 | 1 | |
| 23 | 2010 | 1 | | | | | | |
| 36 | 1987 | - | - | - | - | - | - | |
| 42 | 1999 | 7 | 7 | 1 | 0 | 2 | 0 | a) 4 b) 3 c) 2 |
| 44 | 2001 | 5 | 5 | 0 | 0 | 0 | 1 | a) 330 b) 10 c) 0 |
| 46 | 1983 | 2 | 2 | 2 | 0 | 0 | 1 | a) 1 b) 0 c) 2 |
| 47 | 2010 | 1 | 1 | 0 | 0 | 0 | 0 | a) 1 b) 0 c) 0 |
| 54 | 2004 | 2 | 2 | 0 | 1 | 1 | 2 | a) 2 b) 0 c) 0 |

TABLE 35 ENTREPRENEURIAL ENTERPRISE FACTORS, THE ØSTERGAARD SURVEY 2012

Unexpectedly, neither the number of board positions nor the period as chairman seems to influence the interest or ability for leadership at an operational, tactical or strategic level. The distribution of board position in the entrepreneurial cohort demonstrates that eight out 13 hold a current position, and as a chairman six previously held, but only 5 currently. Regardless of the limited number of boardroom positions, these positions are held over an extended period, which indicates stability.

The entrepreneurial experience in own firms demonstrates the same diversity as outlined above. Thus, the tables 34 and 35 indicate that the entrepreneurs were active

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in more than one firm at a time. Furthermore, the entrepreneurs with more than a couple of firms ran firms characterised by inventions, patents and trademarks. Eight entrepreneurs launch inventions and some plenty, but not all as expected.

An interesting discovery is that the entrepreneur changed the name of the firm in half of the cases. Thereby, a pattern seems to emerge, where entrepreneurs change to a more suitable name for the enterprise over time due to personal shifts and environmental impact, change of focus, objective or cooperation partners may arise. Hence, future research needs to consider name changes besides mergers and acquisitions, bankruptcy and closed ventures as a normal end of firms.

The background diversity and personal motivation of the thirteen entrepreneurs is further reflected in their firm description and the motivation to launch the firm. Thus, the firm description varies between Partner in A/S (1), Director in firm owned by spouse (1), Partnership firm owned outside family (3), One-man firm (3), and Director of own A/S, ApS, I/S or similar (5).

In fact, eight of them launched their firm due to personal ambitions, and five due to opportunity. None of them due to necessity, even some have lost their previous job. Apart from launching an enterprise due to opportunity, respondent 46 mentioned the desire “– to live out and test dreams and theories.” Moreover, respondent 47 identified another reason besides personal ambitions to launch an enterprise: “It became too boring being an employee, and it was strenuous to watch unintelligent directors skim the cream.” Hence, the learning outcome is that entrepreneurs chose to explain their choices as good and potentially an innate ability to see opportunities instead of obstacles impact as well. Moreover, the entrepreneurs seem to label the opportunities as subject to fulfil due to their personal ambitions.

Finally, a search for a pattern between previous occupation and current entrepreneurial leadership characteristics outline only huge diversity. A general pattern, however, is that all the thirteen consider themselves as self-employed, one also as director and another as a salaried employee.

Consequently, the search for essential factors towards successful entrepreneurial leadership suggests that the individual ambitions determine the launching of an entrepreneurial firm and not previous occupation or level of actual leadership. The personal motivations of the entrepreneurs indicate the profound eagerness to be self-employed starting at a young age, if possible. Moreover, self-employed entrepreneurs include a blend of periods of full-time employment, self-employment and a mix to meet obligations. If the entrepreneurs become board members, they seem to be stable. Lastly, name change of firms is a new option to understand the firm lifespan.

All in all, internal factors cause entrepreneurial leadership choices and not coincidentally opportunities or Casson’s learning spirals (2010). Hence, a look into the individual level should be addressed, and that is why it follows in the next section.

6.3 LEARNING FROM THE INDIVIDUAL LEVEL

The leadership scores have been analysed in accordance with the leadership roles, the leader behaviour, the value of scores, and in relation to background data. Generally, the survey result so far indicates that each individual entrepreneur has preferences of their own and some in common with others. Thereby, the leadership test results serve as a starting point to develop an empirically based typology of entrepreneurs.

In this section, four examples of basic types of entrepreneurs are outlined solely based on leadership role preference, behavioural factors, and the value of the role score. Afterwards, the basic types of entrepreneurs are validated with detailed case data as triangulation. The types described are a start-up entrepreneur, a non-entrepreneur, a team-entrepreneur and a core entrepreneur with the respondent cases number 31, 38, 01, and number 47 respectively as examples.

The cases found through the leadership preference scores turn out to be outstandingly good examples from which one can further generalize about basic entrepreneurial standards in view of developing learning programs, policy, and research.

6.3.1 THE START-UP ENTREPRENEUR

The most significant outcome in the nine types of behaviour is the differentiation between a significantly high score (20-25) and an average overall score. An insignificant low or average score correlates with lack of interest in leadership or a diffuse attitude without knowledge and experience to address a specific preference in the test answering. Hence, the most average score is used as an example of the most diffuse score in terms of being inexperienced regardless of the original reason.

| R* | R31 |
|----|-----|
| OG | 7 |
| AG | 13 |
| DG | 10 |
| DC | 11 |
| PC | 9 |
| SC | 10 |
| SP | 9 |
| IP | 10 |
| EP | 11 |

As an example of an average overall score, R31 had a leadership preference role of 35, which is the lowest score in the survey. R31 preferred the leadership role number 16, the Idea Creator Role, but the scores indicate that several possibilities were almost equal in preference. In fact, when the numbers of roles are calculated from a combination of the scores from nine and above, R31 had 18 possible roles with a score span from 28 to 35, and an average score on 31.4, which is also the highest amount of leadership roles and the lowest score average in the survey. The Idea Creator Role is a leadership role in which the leader with an ongoing amendment organizes the

interaction between personal creativity, the testing of creative results and the learning process from the result testing.

R31 is a young programmer with no leadership experience and recently graduated from high school, as seen in Table 36. The data show that an innate leadership potential from the father might be as a leader in project management. Since the father is a role model, R31 presumably learned about entrepreneurship and leadership from him, but at this point there is little certainty regarding how and what he learned. However, R31 learns easily and quickly, and, due to the preferred leadership role, R31 has an ongoing learning process of ideas, which also includes ideas of how to be a

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proper entrepreneurial leader. In such cases, available environmental knowledge and support is crucial.

| R 31 | Description |
|---------------------------------------|---|
| Age | 18 |
| Gender | Male |
| Education | High School graduate |
| Family | Single No children Father: Born: Date (33 years older), Education: "Radio mechanic", Main occupation: "Project coordinator", Main prioritized interest: "Keep in good shape" Mother: Born: Date (23 years older), Main occupation: "Accounts assistant" |
| Talent | I have noticed that compared to others, I am especially good at: " Learning new things – fast." During my life, I have spent at least 10,000 hours on: "Computer games, electric guitar and handball." During my life, I have spent at least 30,000 hours on: "At 18 years, I doubt I have used 30,000 hours at anything but sleep so far." |
| Role models | "My parents, Asger Aamund, and Martin Thorborg" |
| Leadership experience | None No board positions |
| Occupation description and experience | Previous: "Piccolo in a bank" Now: Self-employed and Freelance, One-man business, Launched the first business in 2011 (1 year), Owner of 1 business, Launched 1 business Business: "Websites and online marketing" |
| Life Experience | I have launched my own business primarily due to: Personal ambitions Main prioritized interest: "Strength training in a fitness centre", Second highest prioritized interest: "Windsurfing" Events (both positive and negative), that impact who I am today: - |

TABLE 36 RESPONDENT 31, THE ØSTERGAARD SURVEY 2012

In the summer 2014, R31 launched a new company together with four others, being responsible for the programming together with one of the others. Moreover, all five partners possess one enterprise each besides the common one. In 2015, the first enterprise of R31 was closed after 4 years and 9 months. Hence, the assumption that the profile matches that of a start-up entrepreneur is supported by these facts.

Thus, this example serves as inspiration to entrepreneurial learning programs, and it is suggested to watch for the qualities of the start-up entrepreneur and focus on talent development. In addition, R31 is an excellent example of the importance of incubation parks and their indispensable positive impact on the upcoming entrepreneurs. It is highly probable that a future leadership preference test would show a more significant role preference due to the likelihood that R31 at the moment measured is in a searching phase, learning how to be an entrepreneur, since the childhood environment is not replicable.

6.3.2 THE POTENTIAL NON-ENTREPRENEUR

As opposed to the individuals with weak preferences, some individuals have fewer preferences and thereby a higher degree of certainty about their preferences. Generally, the main issue would still be whether the individual uses these preferences optimally according to their personality and the given task.

| R* | R38 |
|----|-----|
| OG | 15 |
| AG | 9 |
| DG | 6 |
| DC | 20 |
| PC | 6 |
| SC | 4 |
| SP | 18 |
| IP | 6 |
| EP | 6 |

An example of a significant high score with very few preferred leadership roles is seen with R38. R38 has a score of 53 on the role number 1, the Administrator Role. With a calculation of possible leadership roles as a combination of all scores from nine and above, the outcome is two roles with an average score on 50, which is the third highest score. As mentioned earlier, high scores indicate an individual with a specific preference of leadership role and the belonging behaviour. Hence, R38 emphasises the Administrator Role, which intends to manage the daily operations efficiently according to an existing set of rules and the given goals. If necessary,

then the task becomes changing the rules for decisions in order to continue towards meeting the goal.

From the more detailed description, in Table 37, the label of R38 is suggested as being a salaried employee or a business owner, not an entrepreneur. Furthermore, the family pattern, whether it is innate or learned, indicates that family role models and the environment in general are working at an operational level. Similar, R38 points out that the level on which the leadership is performed is operational, which matches the chosen leadership preference.

R38 turns out to be a middle-level manager in a small department with responsibility over four employees. The enterprise main office is located elsewhere (secondary source), why R38 is located in an incubation park near the home. The choice of an incubation park as a place of employment matches R38’s talent and experienced knowledge of more than 10,000 hours, as the entrepreneurial environment aligns with the interest in problem-solving. The choice of carrier is described as being the peak in R38’s life where all elements from the daily life come together, presumably including work-life balance, status, salary, and particularly job content.

In a general perspective, R38 is a core example of the academic struggle about defining an entrepreneur. R38 is not an ordinary employee, not self-employed, not a launcher of an enterprise, not inventing and patenting, but R38 is some of each category. R38 has the security advantages of being an employee, including salary security and sick leave security, but also room for his own decisions in daily life, possibilities of launching new ideas and solutions for the entire company, and of interaction with colleagues and neighbours within the incubation park.

As a fact, R38 is of 2016 no longer is present in the incubation park, neither in the company department. The learning output is that types like R38 should not be described or defined as an entrepreneur, but instead as a business manager.

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| R 38 | Description |
|---------------------------------------|--|
| Age | 35 |
| Gender | Male |
| Education | High School graduate – “Dropped out of further education” |
| Family | <p>Married Two children, ages 1 and 3</p> <p>Father: Education: “Bachelor’s in Law”, Main occupation: “Unskilled worker/Forester”, Last occupation: “Employment and support allowance”, Main prioritized interest: “Rummage among old machinery”, Second highest prioritized interest: “Music”</p> <p>Mother: Education: “Unskilled”, Main occupation: “Housewife”, Last occupation: “Employment and support allowance”, Main prioritized interest: “Gardening”, Second highest prioritized interest: “Painting”</p> <p>Mother’s mother: Education: “Unskilled”, Main occupation: “Cleaning/Cashier”</p> <p>Mother’s father: Education: “Unskilled”, Main occupation: “Unskilled worker”</p> <p>Father’s mother: Education: “Unskilled”, Main occupation: “Housewife/Working at factory”</p> <p>Father’s father: Education: “Boilermaker”, Main occupation: “Machine operator”</p> |
| Talent | <p>I have noticed that compared to others, I am especially good at: “Changing ideas/gap of needs into real business/solutions. Exploiting creative or coordinate technologies for concrete business problems in daily life”</p> <p>During my life, I have spent at least 10,000 hours on: “Solving IT-problems/ technical problems”</p> <p>During my life, I have spent at least 30,000 hours on: “Programming”</p> |
| Role models | “My current chairman” |
| Leadership experience | <p>Leadership functions at an operational level (Who does what today?)</p> <p>Leadership function for 6 years</p> <p>Currently responsible for 4 employees</p> <p>Actual board positions: 1 for 6 years, not chairman</p> <p>Previous board positions: 3 for 3 years, not chairman</p> |
| Occupation description and experience | <p>Previous: “IT technician, programmer, technical support”</p> <p>Now: High-level salaried employee</p> <p>Business: Accounting business from 2005 with 60 employees (secondary source)</p> |
| Life experience | <p>Main prioritized interest: “Running”, Second highest prioritized interest: “Swimming”</p> <p>Events (both positive and negative), that impact who I am today: “The choice of my carrier. It affects everything I do, my daily life and blends together in my head as being me.”</p> |

TABLE 37 RESPONDENT 38, THE ØSTERGAARD SURVEY 2012

6.3.3 THE TEAM-ENTREPRENEUR

In the survey, respondents also reported double roles, as for instance R37, who scored 53 on both role number 25, the Entrepreneur Role and number 27, the Statesman Role. The proposal is that a team-entrepreneur must manage all the three roles with developmental goal-setting and experimental problem-solving. Unfortunately, R37 did not complete the questionnaire, because R37 is actually partner in a team business.

In purpose of pursuing the team entrepreneur, another example is found with almost equal scores in communication styles and also being a team entrepreneur, namely

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R01. Thus, equal score in the communications styles and very strong values in DG-EP indicate great transferable skills in between the three familiar roles. However, working in teams requires adaptive skills not to overrule a partner.

| R* | R01 |
|----|-----|
| OG | 4 |
| AG | 9 |
| DG | 17 |
| DC | 9 |
| PC | 10 |
| SC | 11 |
| SP | 6 |
| IP | 8 |
| EP | 16 |

R01 has extremely significant scores on developmental goal-setting and experimental problem-solving in regard to the preferred leader role. In addition, the three communication styles are almost equal, which indicates several viable options for selecting the best solution for the purpose. The prioritized role with a score on 44 is number 27, the Statesman Role, where the leader uses power positioning, credibility and efficacy to get the leadership process functioning and developing internally in a system and also between the system and the surroundings.

R01 has six roles, when the combinations of all possible roles are outlined from the scores of nine and higher. The main roles, with scores of 44, 43 and 42 are the Statesman Role, the Strategist Role and the Entrepreneur Role, and the secondary roles related to adaptive goal-setting have scores of 36, 35 and 34: Number 18, the Teacher Role, number 17, the Environment Creator Role and number 16, the Idea Creator Role.

The density of the two sets of roles has a strong impact on the leadership skills, which cover all kinds of communication in both adaptive and developmental goal-setting in combination with experimental problem-solving. The likelihood of R01 being easy to collaborate with on entrepreneurial business objectives is very high.

In more detail, from Table 38, it appears that R01 is preoccupied with family and personal relationships, which matches the team function of an entrepreneur. The variety of entrepreneur's preferred leadership roles (a statesman, a strategist and an entrepreneur) increases the possibility of developing new ideas and solutions for systems, individuals and gaps in the market. R01 gained innate and learned knowledge from the family background together with skills from a formal education in IT to respond to the entrepreneurial challenges, with 25 inventions and one registered trademark as evidence.

Moreover, the personal data indicate that the main motive for R01 is to invent and develop, which require a job position in either several enterprises during a lifespan or in one highly developmentally oriented company. R01 and those who are like minded need freedom to invent and also need room for family and work-life balance to functioning optimal.

In 2011, investors got heavily influenced in the company, and R01 possesses only a small equity interest. In 2015, the company changed the name due to new main product: an ethical system invented by R01. R01 continues with minor equity interest and most importantly as chief developer in a team at the usual location apart from the main location of the company.

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| R 01 | Description |
|---------------------------------------|--|
| Age | 30 |
| Gender | Male |
| Education | Medium length HE (3-4 years) |
| Family | <p>Married - 2 children, "Lovely children"</p> <p>Father: Born: Date (29 years older), Education: "Municipal primary and lower secondary school", Main occupation: "Programmer", Last occupation: "Programmer", Main prioritized interest: "Music" Second highest prioritized interest: "Technology"</p> <p>Mother: Born: Date (27 years older), Education: "Social and health care assistant", Main occupation: "Nursing home leader", Last occupation: "Nursing home leader", Main prioritized interest: "Music", Second highest prioritized interest: "Books"</p> <p>Mother's mother: Born: Year (50 years older), Education: "Tax department", Main occupation: "Tax department/Pensioner"</p> <p>Mother's father: Born: Year (62 years older), Education: "Autodidact artist", Main occupation: "Visual artist", Main interest: "Art"</p> <p>Father's mother: Born: Year (57 years older), Education: "Municipal primary and lower secondary school", Main occupation: "Pensioner/Cleaning assistant", Main interest: "Puzzle"</p> <p>Father's father: Born: Date (65 years older), Education: "Municipal primary and lower secondary school", Main occupation: "Pensioner/Chief engineer", Main interest: "Machines"</p> <p>Facts and more about siblings that impact: "My brother is one of my best friends"</p> <p>Facts and more about children that impact: "My children make me complete"</p> <p>Facts and more about other family members that impact: "I love my nearest family. They are always there for me, as I am for them"</p> |
| Talent | <p>I have noticed that compared to others, I am especially good at: "Problem-solving, overviewing problems"</p> <p>During my life, I have spent at least 10,000 hours on: "Cooking"</p> <p>During my life, I have spent at least 30,000 hours on: "Programming, Music"</p> |
| Role models | "My parents" |
| Leadership experience | <p>Leadership functions at an operational level (Who does what today?), a tactical level (How do we succeed with that?) and a strategic level (Where do we go and how?)</p> <p>Leadership function for 2 years</p> <p>Currently responsible for 2 employees</p> <p>No board positions</p> |
| Occupation description and experience | <p>Previous: "Systems developer"</p> <p>Now: Self-employed and High-level salaried employee, Business owned as partnership outside the family, Launched the first business in 2011 (1 year),</p> <p>Owner of 1 business, Launched 3 businesses, Business: "Development business"</p> <p>Event which was decisive to launch my own business: "My passion for inventing and developing"</p> <p>Number of inventions: 25</p> <p>Number of registered trademarks: 1</p> |
| Life Experience | <p>I have launched my own business primarily due to: Personal ambitions</p> <p>Main prioritized interest: "Family", Second highest prioritized interest: "Music"</p> <p>Events (both positive and negative), that impact who I am today: "Meeting my wife. It has developed me socially to be a better man"</p> |

TABLE 38 RESPONDENT 01, THE ØSTERGAARD SURVEY 2012

6.3.4 THE BASIC ENTREPRENEUR

| R* | R47 |
|----|-----|
| OG | 3 |
| AG | 11 |
| DG | 16 |
| DC | 18 |
| PC | 5 |
| SC | 7 |
| SP | 7 |
| IP | 4 |
| EP | 19 |

Another example of a high score and very few leadership roles is R47, this time however on the leadership role number 25, the Entrepreneur Role. Even as an entrepreneur, R47 has a significant high score with 53. The Entrepreneur Role is a leadership role, where the leader continuously launches new initiatives while planning how and when these initiatives can start. Hence, this type lives a risky life dominated by passionate decisions in terms of realizing and implementing the visions.

With a calculation of possible roles from scores of nine and above, R47 has only one more role, namely number 16, the Idea Creator Role with a score of 48, which indicates that R47 functions on a daily basis with a significant and dominating high speed of idea creation compared to others.

In more detail, as seen in Table 39, R47 uses the knowledge from his family to imitate an entrepreneurial life style. However, R47 feels challenged by having a wife with ambitions, which is a major change from the well-known pattern of supporting spouses. Furthermore, R47 follows in the father's footsteps not only in relation to education and occupation but also in interests.

Generally speaking, part of the explanation for this is presumably due to innate personality traits and part is due to environmental influences. Of course, the balance should be dedicated investigated in future surveys, however, in this case the mix seems to be successful. R47 has a common thread through education, interests, income-connected activity and time marshalling, which is suggested to be a fundamental cornerstone of a successful and growing entrepreneurial business.

R47 is the CEO of the entrepreneurial company and moved the company to a larger city in 2014 having 7 employees and 80 freelancers connected for different tasks, which in 2016 grew to 9 employees and still 80 connected freelancers. Consequently, R47 could be characterised as a core entrepreneur, or, in other terms, a “successful” entrepreneur.

In conclusion, empirical investigation of essential factors in the intersection of entrepreneurs and leadership skills outline diversity indicating individual and presumably innate preferences of leadership. However, the entrepreneur’s behaviour, skills and preferences in regard of leadership preferences tend to be intertwined.

The learning from individual cases speaks in favour of a differentiation among entrepreneurs and theoretically dividing the concept of entrepreneurs into different categories. These categories can be connected as with the start-up entrepreneur to be more experienced over time and move to another category, where others are separated more profoundly. An example of less changeable categories is the non-entrepreneur and the basic entrepreneur.

Hence, it is suggested to pursue the categorisation of entrepreneurs further, not only based on leadership preferences but also more profoundly based on innate personality

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traits, environmental background and lifelong impact from, for instance, educational choices and relations.

| R 47 | Description |
|---------------------------------------|---|
| Age | 33 |
| Gender | Male |
| Education | M.Sc., M.IT and PhD |
| Family | <p>Married One child Father: Born: Date (28 years older), Education: "Engineer", Main occupation: "Self-employed, contractor", Last occupation: "Tractor shovel driver", Main prioritized interest: "Amateur radio" Second highest prioritized interest: "Boats" Mother: Education: "Nurse", Main occupation: "Nurse", Last occupation: "Employment and support allowance", Main prioritized interest: "Horseback riding", Second highest prioritized interest: "Art of weaving" Mother's mother: Education: "Nurse", Main occupation: "Assisting wife/Farm", Main interest: "The garden" Mother's father: Education: "Carpenter", Main occupation: "Self-employed contractor" Father's mother: Education: "None", Main occupation: "Housewife", Main interest: "The house and garden" Father's father: Education: "Accountant", Main occupation: "Military", Main interest: "The garden" Facts and more about siblings that impact: "I have a little brother, 3.5 year younger" Facts and more about children that impact: "I'm challenged about work-life balance as an self-employed person with a child and a wife, who also has ambitions"</p> |
| Talent | <p>I have noticed that compared to others, I am especially good at: "integrating IT and technology" During my life, I have spent at least 10,000 hours on: "Table tennis" During my life, I have spent at least 30,000 hours on: "becoming a specialist at implementing and developing IT for the construction sector"</p> |
| Role models | "I don't know, maybe my parents" |
| Leadership experience | <p>Leadership functions at a strategic level (Where do we go and how?) Leadership function for 2 years Currently responsible for 2 employees No board positions</p> |
| Occupation description and experience | <p>Previous: "Consulting Engineer" Now: Self-employed in business owned by married couple, Director in own business Launched the first business in 2010 (2 years), Owner of 1 business, Launched 1 business Business: "Active in 1" Specialist in project and risk management (Secondary source) Event which was decisive to launch my own business: "I withdrew from an offer to be partner and chose to start on my own" Number of inventions: 1</p> |
| Life Experience | <p>I have launched my own business primarily due to: Personal ambitions "It became too boring to be hired, and it was annoying to watch a bunch of stupid directors skim the cream." Main prioritized interest: "My son", Second highest prioritized interest: "Kayaking" Events (both positive and negative), that impact who I am today: Maybe my mother's disease.</p> |

TABLE 39 RESPONDENT 47, THE ØSTERGAARD SURVEY 2012

6.4. GENDER DIFFERENCES

In the previous sections, leadership scores gave rise to analyses across the cohort and in individual cases investigating the essential factors of entrepreneurs combined with leadership.

Here, the leadership role scores are analysed for gender differentiation. The female entrepreneurs are represented by R03, R14, R36, R48 and R51, as displayed in Table 40. However, a sample of only five individuals is not generalizable and this short analysis should be read with this limitation in mind.

| Female entrepreneurs leadership role preference | | | | | |
|---|-----|-----|-----|-----|-----|
| R* | R03 | R14 | R36 | R48 | R51 |
| OG | 11 | 5 | 2 | 9 | 7 |
| AG | 5 | 9 | 12 | 7 | 11 |
| DG | 14 | 16 | 16 | 14 | 12 |
| DC | 9 | 6 | 9 | 11 | 7 |
| PC | 10 | 10 | 8 | 8 | 11 |
| SC | 11 | 14 | 13 | 11 | 12 |
| SP | 7 | 7 | 5 | 5 | 13 |
| IP | 16 | 13 | 7 | 19 | 6 |
| EP | 7 | 10 | 18 | 6 | 11 |

TABLE 40 FEMALE RESPONDENTS, THE ØSTERGAARD SURVEY 2012

Nevertheless, all five female entrepreneurs prefer developmental goal-setting and have a systemic communication behaviour. The systemic communication style often seems to be unpleasant for employees and therefore is considered as a better match for a formalized language environment such as governmental, legal and political arenas or in consultancy business with reference to other leaders. Furthermore, three out of five have the same role preference, Number 24, the Communicator Role due to their preferred problem-solving style. In general, these individuals would be excellent consultants in marketing, politics, design, or wherever their knowledge allows them to act.

Moreover, a calculation of all role preferences for each respondent using all scores of nine and above outline a median number of roles for female entrepreneurs being six with a distribution from four to eight, and with a median score on 38.8 with a distribution from 29 to 47 in the raw scores.

From Table 41, it can be seen how female entrepreneurs dominate the leadership roles characterised by developmental goal-setting and interactive problem-solving, where the male entrepreneurs dominate the leadership roles characterised by both operating and adaptive goal-setting and systematic problem-solving. Concerning the adaptive goal-setting preferences, the male entrepreneurs have a significant preference for number 10, the Coordinator Role, and number 16, the Idea Creator Role.

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| Female versus Male preferred Leadership Roles | | | | | | |
|---|----------|--------------|------------|------------------|----------------|---------------------------------|
| Leadership roles | Coding | Female roles | Male roles | Female roles (%) | Male roles (%) | Difference in gender preference |
| 1. The Administrator | OG+DC+SP | 0 | 10 | 0 | 1.20 | Male |
| 2. The Diagnostician | OG+PC+SP | 0 | 3 | 0 | 1.20 | Male |
| 3. The Systems Constructor | OG+SC+SP | 0 | 2 | 0 | 0.80 | Male |
| 4. The Group Leader | OG+DC+IP | 2 | 4 | 6.7 | 1.70 | Female |
| 5. The Sparring Partner | OG+PC+IP | 1 | 3 | 3.3 | 1.20 | Female |
| 6. The Meeting Conductor | OG+SC+IP | 2 | 1 | 6.7 | 0.40 | Female |
| 7. The Controller Role | OG+DC+EP | 0 | 6 | 0 | 2.50 | Male |
| 8. The Arbitrator Role | OG+PC+EP | 0 | 4 | 0 | 1.70 | Male |
| 9. The Experimenter | OG+SC+EP | 0 | 3 | 0 | 1.20 | Male |
| 10. The Coordinator | AG+DC+SP | 0 | 15 | 0 | 6.20 | Male |
| 11. The Process Tactician | AG+PC+SP | 1 | 9 | 3.3 | 3.70 | Male |
| 12. The Reorganiser | AG+SC+SP | 1 | 5 | 3.3 | 2.10 | Male |
| 13. The Politician Role | AG+DC+IP | 0 | 9 | 0 | 3.70 | Male |
| 14. The Process Consultant | AG+PC+IP | 1 | 10 | 3.3 | 4.10 | Male |
| 15. The Stakeholder Cons. | AG+SC+IP | 1 | 7 | 3.3 | 2.90 | Female |
| 16. The Idea Creator | AG+DC+EP | 1 | 15 | 3.3 | 6.20 | Male |
| 17. The Environment Creator | AG+PC+EP | 2 | 12 | 6.7 | 4.98 | Female |
| 18. The Teacher Role | AG+SC+EP | 3 | 10 | 10.0 | 4.10 | Female |
| 19. The Strategic Planner | DG+DC+SP | 0 | 13 | 0 | 5.40 | Male |
| 20. The Stakeholder Analyst | DG+PC+SP | 1 | 10 | 3.3 | 4.10 | Male |
| 21. The Philosopher | DG+SC+SP | 1 | 9 | 3.3 | 3.70 | Male |
| 22. The Organiser Role | DG+DC+IP | 2 | 9 | 6.7 | 3.70 | Female |
| 23. The Learner Role | DG+PC+IP | 2 | 11 | 6.7 | 4.60 | Female |
| 24. The Communicator | DG+SC+IP | 3 | 9 | 10.0 | 3.70 | Female |
| 25. The Entrepreneur | DG+DC+EP | 1 | 20 | 3.3 | 8.30 | Male |
| 26. The Strategist Role | DG+PC+EP | 2 | 15 | 6.7 | 6.20 | Female |
| 27. The Statesman | DG+SC+EP | 3 | 17 | 10.0 | 7.10 | Female |
| SUM | | 30 | 241 | | | |

TABLE 41 GENDER ROLE PREFERENCES IN LEADERSHIP, THE ØSTERGAARD SURVEY 2012

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In contrast, the female entrepreneurs are more often seen in number 18, the Teacher Role. Within the developmental goal-setting leadership roles, the female entrepreneurs especially lead in role number 24, the Communicator Role, and number 27, the Statesman Role. The male entrepreneurs dominate significantly in role number 25, the Entrepreneur Role. However, female entrepreneurs dominate in role number 26, the Strategist Role, which might be interesting in regard to becoming an entrepreneurial leader ahead of competitors.

All in all, the preferred leadership roles for female entrepreneurs in the Østergaard Survey 2012 are the Communicator Role with the highest role score at 42.7, the Statesman Role with a score of 40.7 and the Teacher Role with a score of 36.7. The table display that the female respondents solve their problems in an interactive manner (8 IP roles), with adaptive goal-setting (7 AG roles) and communicating in a personal and systemic manner (6 PC and 6 SC roles). These preferences happen to match the consultant roles number 14, the Process Consultant Role and number 15, the Stakeholder Consultant Role.

Of course, before distributing female entrepreneurs into specific roles these results need to be verified further in a larger cohort and therefore only serve as hypotheses.

6.5 THE ENTREPRENEURIAL LEADER ENVISIONED BY NINE ENCODINGS

After the leadership scores have been analysed in accordance roles, behaviour, value of scores, in relation to background data, in cases and in relation to gender, the outcome is that the nine encodings turn out to be pivotal regarding leadership of entrepreneurs.

The relationship between the coding elements of the leadership roles unveils interesting information, especially the lacking correlations and the personal characteristics in negative relationships. Learning from positive relationships and correspondence between variables is straightforward, but much can be learned from non-relationships and non-correlations and also from informative pattern.

Hence, research using a correlation matrix of the inter-item correlation of the leadership role variables revealed that the correlation between the nine coding variables ranged from a minimum inter-item correlation of 0.010 towards a maximum of 0.840.

Hence, the correspondence between experimental problem-solving and systematic problem-solving is almost opposite with a correlation of 0.010. Consequently, an entrepreneur characterised by experimental problem-solving is the opposite of an individual with the systematic problem-solving behaviour found in the leadership roles Number 19, the Strategic Planner; Number 20, the Stakeholder Analyst; and Number 21, the Philosopher with developmental goal-setting and different communication styles. Hence, these three roles do not include entrepreneurs or entrepreneurial leaders, but instead they characterise individuals, who prefer development job types in a systematic environment with a given case or task.

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The developmental goal-setting, one of the parameters of the entrepreneurial mindset, demonstrates an increasing correlation through the communication styles from decision-making over personal to systemic communication as the best communication style in a developmental goal setting.

In contrast, the correlation is similar between developmental goal-setting and systemic, interactive and experimental problem-solving. Hence, the pattern seems to outline the different levels of management: the operations level, the tactical level and the strategic level as was the majority's preference in this cohort.

The highest correlation value of 0.840 appeared between the role coding variables: developmental goal-setting and systemic communication related to the leadership roles Number 21, the Philosopher; Number 24, the Communicator; and Number 27, the Statesman. Thus, 7% of the cohort selected the Philosopher, 14% the Communicator, and 17% the Statesman leadership role, where the two latter were preferred by females (see Table 41).

The smallest correlation is seen in the coding combination of OG-IP and OG-EP that are lacking in the cohort, indicating that the combination of operating goal-setting in relation to interactive problem-solving and experimental problem-solving is irrelevant for entrepreneurs. Thus, the likelihood of entrepreneurs combining operating goal-setting with problem-solving, other than systematic problem-solving, is rare.

In conclusion, the experimental style of problem-solving is preferred by entrepreneurs and entrepreneurial leaders. Moreover, experimental problem-solving turns out to be a determining variable, with a positive value for an entrepreneur and a negative value for a non-entrepreneur. However, the pattern also reveals that the level of strategic functioning is reflected in the entrepreneurial preferences with developmental goal-setting, systemic communication and experimental problem-solving. Moreover, the strategic level is strongly preferred over the tactical and operations levels in goal-setting, communication and problem-solving in general.

To sum up, the behavioural characteristics of an entrepreneur turn out to be determining experimental problem-solving style in combination with firstly developmental goal-setting or secondly adaptive goal-setting.

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CHAPTER 7. EMPIRICAL REFLECTIONS

“Life Is Not a Problem to Be Solved, But a Reality to Be Experienced.”

Søren A. Kierkegaard

From the empirical findings and analyses, the results are processed further deductively to confirm hypothetic assumptions and inductively to open for new research lines in unexpected findings. In addition, the empirical reflections confirm partially the a priori model and inform the suggested a posteriori model.

First in Chapter 7, the theoretically developed core set of personality traits are empirically verified, afterwards the score values are further processed, and the knowledge derived from the combination of personality traits and leadership preferences are addressed to better respond to the findings in Chapter 6. Then, essential characteristics of the entrepreneurial leader are investigated, followed by an exhaustive survey of the outer psychological factors impacting an entrepreneur. In order to influence one's own future entrepreneurial path, deliberate practice is discussed due to the impact from self-will in opposition to innate traits and stable environment. Finally, the empirical points of the entrepreneurial personality are outlined.

7.1 THE CORE TRAITS IN THEORY, EMPIRICALLY VERIFIED

Multiple attempts have been made to outline the main attributes of an entrepreneur by measuring personality traits with different methods. The number and differentiation of the personal characteristics in the literature complicates the process of measurement and reduces comprehension. For instance, Risk Willingness is the most frequently mentioned personality trait in relation to an entrepreneur, but updated measurement methods would probably redefine the trait into Calculated Risk Willingness in consequence of “findings thus far shed serious doubt on the existence of risk attitude as a measurable, stable personality trait, or as a domain-general property of a utility function in wealth or income” (Eckel & Grossman, 2008, p. 1073), which is consistent with results from Slovic (1964) and later confirmed by Weber, Blais, & Betz (2002).

Hence, the importance of operating personality traits measured that are as valid and reliable is obvious. In line with this, it is necessary to characterise an entrepreneur specifically apart from a leader or a managerial salesperson, which becomes challenging with an entrepreneurial leader. Accordingly, the entrepreneur and the leader should be clarified alternately.

In terms of the interpretation of the entrepreneurial personality, all registered traits and attributes from this research were psychologically analysed. For the reason of specifying an entrepreneur and not a leader, Risk Willingness was eliminated since a leader regularly makes decisions on an uncertain basis. By the same token,

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descriptions identified as being motivations rather than traits were excluded. Additionally, the names of the traits that were slightly misaligned due to differences in vocabulary traditions were further aligned towards the personality test (PAPA Test) vocabulary. However, the exact item content of each trait should be considered as well in future cross-cultural measurement. In this selection process, the list was narrowed down to include the fewest possible personality traits of common agreement to characterise the core entrepreneurial personality from a theoretical perspective: Autonomy, Exploration Drive, Preparedness for Change, and Self-preservation Instinct, which are defined in a psychological interpretation (see section 3.2.5 and Definition 2).

For further verification, the theoretical core of an entrepreneur is examined in relation to the theoretical leadership role of an entrepreneur by means of the leadership preference test (JOE) on the cohort of current active entrepreneurs. The relationship is investigated using all leadership scores of all entrepreneurs instead of only those with the Entrepreneur role as the first prioritized role. The objective is to confirm or reject a basic relationship by the correspondence between an entrepreneur's score on the Entrepreneur Role and the core theoretical entrepreneurial traits.

| Significant correlations between theoretical developed personality traits and the Entrepreneur Role of entrepreneurs | | |
|--|-------------------------|---------------------------------|
| 25 Entrepreneur All (N 46) | | Theoretical Entrepreneur (N 55) |
| Pearson | Correlation Coefficient | .410** |
| | Sig. (2-tailed) | .005 |
| | N | 46 |
| Kendall's tau-b | Correlation Coefficient | .333** |
| | Sig. (2-tailed) | .002 |
| | N | 46 |
| Spearman's rho | Correlation Coefficient | .447** |
| | Sig. (2-tailed) | .002 |
| | N | 46 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | |

TABLE 42 SIGNIFICANT CORRELATION BETWEEN THE CORE SET OF PERSONALITY TRAITS AND THE MOST PROMINENT LEADERSHIP ROLE, THE ENTREPRENEUR, THE ØSTERGAARD SURVEY 2012

The correlation between the theoretical core characteristic of an entrepreneur and the Entrepreneur Role certainly lived up to expectations as demonstrated in Table 42. With a mean score of 34.957 for the leadership role Number 25, the Entrepreneur, from all the respondents, the Pearson correlation coefficient is 0.410, $p = 0.005$. Kendall's correlation coefficient is 0.333, $p = 0.002$, and the Spearman correlation coefficient is 0.447, $p = 0.002$. Overall, the correlation is significant at the 0.01 level (2-tailed) between the theoretical developed entrepreneurial core set of personality traits and the most prominent leadership role of entrepreneurs.

Thus, the personality traits Autonomy, Exploration Drive, Preparedness for Change, and Self-preservation Instinct correspond with the behaviour related to the leadership role the Entrepreneur. Consequently, the psychological core characteristic of an

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entrepreneur is an individual, who possesses autonomy; the capacity for self-motivated goal-orienting, explorative drive; the need for active stimulation and search for new knowledge and experience, preparedness for change; the will to pursue better conditions through behavioural changes and overcoming obstacles, and self-preservation instinct; the survivor-instinct and the will to live.

Moreover, statistical analysis shows a significant correlation at the 0.05 level (2-tailed) between the basic set of entrepreneurial traits: Autonomy, Exploration Drive, Preparedness for Change, and Self-preservation Instinct and the leadership role Number 26; the Strategist but not a significant correlation between the theoretical entrepreneurial personality and the leadership role of the Statesman.

Due to the only difference between the three leadership roles being the communication style, entrepreneurs are significantly characterised by their preferred communication style. The communication style of the Entrepreneur is characterised by an operating tone eager for the best results here and now, whereas the Strategist communicates in a style characterised by an interpersonal tone seeking synergy among all participants. The Statesman communicates apparently in a non-entrepreneurial style characterised by a formal tone controlling for durability in decades to come for all the involved systems and organisations.

7.2 THE SCORE VALUES DISPLAY PROFOUND PATTERNS

In general, “most” is best and “more” is better, but in relation to personality scores the outcome is not that simple. However, the previous investigation of the score values in relation to an entrepreneurial leadership personality suggests that the value matters in personality scores and in leadership preference scores. Hence, the score values will be examined in depth. First, the personality scores are addressed before moving to the entrepreneurial leader scores in terms of revealing the distinctive characteristics, and finally they are combined in section 7.3.

7.2.1 THE SCORE VALUES OF ENTREPRENEURIAL PERSONALITY TRAITS

In terms of the personality traits, the entrepreneur’s profound personality attributes and functional categories (see Chapter 4.2.3.1) related to the traits reveals new knowledge through research of the score values.

The 36 personality traits are measured using 480 items, coded and outlined on a standardised scale from 1 to 5, where 5 is the highest. The twelve traits with the highest score and a mean value just above 3 are in ranked order: Personal Manifestation, Preparedness for Change, Achievement Instinct, Risk Willingness, Autonomy, Vigour, Systematic Mindedness, Urge to Rebel, Dominance, Passion, Reflectiveness, and Exploration Drive, which coincidentally include 3 traits from the theoretical core set of personality traits.

A deeper look into the mean trait scores displays that the foundation of the entrepreneurial personality is based on the two basic personality aptitudes Innovation Potential with emphasis on the functional categories Power and Growth, and second, the personality aptitude Leadership Potential, with emphasis on the functional

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category Motivation Management. Furthermore, four of the lowest scores coincide with the basic personality aptitude Social Potential and especially the functional category Cooperation, meaning that this area is least emphasised by entrepreneurs.

In consequence, a psychological analysis of the entrepreneurial traits with highest value indicates that an entrepreneurial driving force stems from Personal Manifestation along with Achievement Instinct and followed by Urge to Rebel, Dominance and Exploration Drive as unstoppable movement towards former unknown and outstanding endeavours. Moreover, the profound entrepreneurial behavioural pattern emerges from a vast cocktail of personality traits: Personal Manifestation, Risk Willingness, Autonomy, Vigour, Systematic Mindedness, Urge to Rebel, Dominance, Passion, Reflectiveness, and Exploration Drive, which together characterise a highly energetic individual with power and curiosity who can be inspiring to work with and unpleasant to disagree with.

The personal resilience appears in the personality traits: Preparedness for Change, Autonomy, Passion and Reflectiveness. Since the entrepreneurs have many diverse responsibilities, they need to handle more than usually number of challenges in their life, and they tend to succeed. Hence, the entrepreneurial resilience package could be a recipe for avoiding severe stress symptoms, depression and similar issues.

In opposition, the entrepreneur's vulnerable point appears in the high score of Risk Willingness, Dominance and Urge to Rebel, which repels advisors and investors, especially in busy periods with insufficient patience and circumspection. This vulnerability is further supported by the lowest scores on Stress Tolerance, Social Maturity, Tolerance, Democratic Attitude, Experience of Well-being, Adaption Capacity, and Need for Contact. In the worst-case scenario, a hazardous situation occurs impacting the entrepreneur to live out a supercilious attitude that prompts others, for instance potential supporters, to feel insignificant and desire to disappear.

Another area of vulnerability is the entrepreneur's well-being outlined in the low-scoring personality traits Stress Tolerance and Experience of Well-being. The cohort, and presumably entrepreneurs in general, are continuously pressured and constantly push themselves to the limit with a risk of developing strain and one-day succumbing. Thus, it is suggested that policy makers address an entrepreneur's well-being.

The coping strategy of balancing well-being in relation to the amount of entrepreneurial challenges is partly explained by the low-scoring personality trait Need for Contact and the high-scoring personality traits of Autonomy and Reflectiveness, together with Passion, Exploration Drive, and Personal Manifestation, plus Self-preservation Instinct from the theoretical core entrepreneur. In a psychological perspective, entrepreneurs possess the ability to be alone and continue an endeavour passionately with curiosity and searching for possibilities. The well-being sample encourages the entrepreneur to create hope; the essential ingredient of resilience (Werner & Smith, 1992).

Generally, entrepreneurs and entrepreneurial leaders emphasise the personality trait Passion. Hence, a fireball, a passionate future entrepreneur and others who are not

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understood and supported in the family, kindergarten, elementary school and so on will not thrive and might waste talent and achievements. Therefore, incubation parks and entrepreneurial learning programs at universities are vital.

All in all, the entrepreneurs take risk on their own to reach fame, new discoveries and environments and conquer personal limitations. Risk Willingness is identical to an entrepreneur in popular science, but in reality the entrepreneur and the entrepreneurial leader act with Risk Willingness combined with Personal Manifestation, Achievement Instinct, Preparedness for Change, Exploration Drive, and Autonomy. At the same time, the entrepreneur controls behaviour with the traits Systematic Mindedness and Reflectiveness. Hence, a refined characteristic of an entrepreneur is suggested to be Calculated Risk Willingness.

In summary, the average entrepreneur dislikes having to cooperate, has an analytical efficacy, manages motivationally with an eye for achievement and risk, and generally prefers power and growth. However, the standard deviation of personality trait scores indicates a relative large diversity of the cohort and the potential existence of subgroups among the entrepreneurs.

7.2.2 THE SCORE VALUE OF ENTREPRENEURIAL LEADERSHIP PREFERENCES

The leader roles with the highest scores, and therefore the roles which are valued the most by the entrepreneurs in the cohort are, in descending order:

- Number 25, the Entrepreneur Role (34.957),
- Number 19, the Strategic Planner Role (33.478),
- Number 16, the Idea Creator Role (33.304),
- Number 26, the Strategist Role (32.783),
- Number 22, the Organiser Role (32.717),
- Number 27, the Statesman Role (32.326),
- Number 10, the Coordinator Role (31.826),
- Number 20, the Stakeholder Analyst Role (31.304),
- Number 17, the Environment Creator Role (31.130),
- Number 13, the Politician Role (31.065) and the last development roles:
- Number 21, the Philosopher Role (30.848),
- Number 23, the Learner Role (30.543) and
- Number 24, the Communicator Role (30.087)

Except for the Idea Creator Role, the highest valuations appear in the developmental roles from Number 19 to Number 27, followed by the adaptation roles from Number 10 to Number 18, and with the lowest valuation in the operating leadership roles Number 1 to Number 9. However, the standard deviation turns out to be highest in the developmental roles as well as in Number 1, which indicate such a level of diversity that the generalizability is weak. The psychological analysis is conducted with this limitation in mind and the common characteristics of the preferred roles turn out to be based on preferred combinations of behaviours.

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Accordingly, the combination of Developmental Goal-setting and Decision Communication and the combination of Developmental Goal-setting and Experimental problem-solving are favourites among the entrepreneurs in this survey. On the contrary, the entrepreneurial leader is characterised by a very weak interest in and no identification with Operating Goal-setting according to the eight lowest scores. Hence, non-entrepreneurs or self-employed related to administrative lines of businesses without employees prefer leadership roles with operating goal-setting.

In a psychological interpretation, the fact that some entrepreneurs have interest in Adaptive Goal-setting combined with Decision Communication indicate a talent of adding solutions to an existing market platform by specialising in incremental development. These incremental types of entrepreneurs would fit into the leadership roles: The Coordinator; the Politician; and the Idea Creator, where the latter have an idealistic sense of improvement solutions delivered in cascades.

In addition, the entrepreneurs and entrepreneurial leaders corresponding to the combination of Developmental Goal-setting and Decision Communication in the Strategic Planner Role; the Organiser Role and the Entrepreneur Role are eager to obtain results, ideally immediately.

Without doubt, the developmental leadership roles with the combination of Developmental Goal-setting and Experimental Problem-solving: The Entrepreneur Role, the Strategist Role, and the Statesman Role are the most characteristic for entrepreneurs and entrepreneurial leaders moving from one project to the next, explained in the following citation by the industrial designer Jacob Jensen:

“Of course, you become glad of appreciation. But it is not the most important; it is not what decides whether you start on the next task. The next task, it is like the next challenge, it can be completely different. What counts, what’s the challenge; it is to find the solution. Find that puzzle-solution. Get that feeling, where you know: That’s it. That’s it!” (Østergaard, 2003, p. 50)

7.3 THE COMBINATION OF TRAITS AND LEADERSHIP PREFERENCES

In this section, the combination of personality traits and roles is discussed to enhance the interpretation and reveal the strengths and weaknesses of the entrepreneur. The essential characteristics are presented to give an overview and then the investigations supporting these characteristics are outlined divided in two subsections. First, the results from the personality test and the leadership test are combined. Second, a deeper selection of the most intriguing elements leads to fundamental entrepreneurial patterns.

The pattern of the entrepreneur, based on significant results, is characterised by leadership behaviour dominated by developmental goal-setting and experimental problem-solving most often combined with decision-oriented communication followed by inter-personal communication. Moreover, the entrepreneurs appear to possess an innate potential for especially innovation and leadership together with a social inadequacy.

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In fact, the most imaginary result concerns personality traits. Thus, the correlation reveals that ten personality traits characterise an entrepreneur, whereas two negatively (meaning opposite associated). The negative related traits are: Structuring Capacity and Adaptation Capacity. The eight positive related traits are: Achievement Instinct, Autonomy, Creative Drive, Dynamism, Exploration Drive, Initiative, Preparedness for Change, and Self-preservation Instinct.

The above mentioned pivotal characteristics are verified through firstly, the correlation between the three preferred roles and the two main personality aptitudes, and secondly, the correlation between the three preferred roles and seven selected personality traits as outlined in the next two sections.

7.3.1 THE CORRELATION BETWEEN THREE LEADERSHIP ROLES, THE BASIC TRAITS (THEORETICALLY), AND THE BASIC PERSONALITY APTITUDES

In regard to the subject of entrepreneur's leadership, the correlation between the developmental leadership roles, the core personality due to theory, and the scores on the basic aptitudes Leadership Potential and Innovation Potential are examined in depth.

First, a highly significant correlation measurement of the core entrepreneurial traits (N=55) substantiates the further validation. The theoretical entrepreneur correlates with the basic aptitudes Leadership Potential and Innovation Potential at the 0.01 significance level (2-tailed) with a Pearson correlation of 0.714 and 0.876, respectively, $p < .01$.

| Correlations between Leadership Roles, Basic Aptitudes, and Basic Traits | | | | |
|--|-----------------|----------------------|----------------------|--------------------------|
| Pearson Correlation | | Leadership Potential | Innovation Potential | Theoretical Entrepreneur |
| No. 25 Entrepreneur All | P Correlation | .298* | .361* | .410** |
| | Sig. (2-tailed) | .044 | .014 | .005 |
| | Covariance | 11.974 | 14.830 | 8.498 |
| | N | 46 | 46 | 46 |
| No. 26 Strategist All | P Correlation | .283 | .396** | .354* |
| | Sig. (2-tailed) | .057 | .006 | .016 |
| | Covariance | 11.358 | 16.283 | 7.332 |
| | N | 46 | 46 | 46 |
| No. 27 Statesman All | P Correlation | .184 | .267 | .260 |
| | Sig. (2-tailed) | .222 | .073 | .081 |
| | Covariance | 8.973 | 13.342 | 6.557 |
| | N | 46 | 46 | 46 |
| ** Correlation is significant at the 0.01 level (2-tailed). | | | | |
| * Correlation is significant at the 0.05 level (2-tailed). | | | | |

TABLE 43 CORRELATION BETWEEN THREE ROLES AND BASIC TRAITS, THE ØSTERGAARD SURVEY 2012

Second, the correlation investigation as outlined in the Table 43 indicate that the core theoretical entrepreneur correlates most strongly and highly significant at the 0.01

level (2-tailed) with the Entrepreneur leadership role with a Pearson correlation of 0.410, and secondly significant at the 0.05 level (2-tailed) with the Strategist.

The set of personality traits clustered under the basic aptitude Leadership Potential correlates most strongly with the leadership role the Entrepreneur, with a Pearson correlation of 0.298, significant at the 0.05 level (2-tailed). In contrast, the basic aptitude Innovation Potential shows a stronger coherence to the Strategist, correlating with 0.396 and a massive significance at 0.006, and secondly with the Entrepreneur correlating at the 0.05 level (2-tailed).

The basic aptitudes and the leadership roles are mutually highly related with correlations significant at the 0.01 level (2-tailed) in this cohort and thereby supporting the argument for selecting these leadership roles as entrepreneurial and opposite these basic aptitudes are seen as representative of entrepreneurial leaders.

7.3.2 THE CORRELATION BETWEEN THREE LEADERSHIP ROLES AND SEVEN TRAITS

The previous analysis of correlation between the developmental leadership roles and the personality traits revealed significance for twelve personality traits (see section 7.2.1). Seven of these personality traits display correlations significant at the .01 level with Pearson's correlation coefficient, Kendall's tau-b or Spearman's rho as outlined in Table 44.

A few results are outstanding significant and signal robust new knowledge about the innate personality of entrepreneurs in regard of their profound behaviour. Due to minor differences of measurement methods, the results of three main methods are presented.

First and foremost, Table 44 clarifies the strong relationship between the personality trait Initiative and the Strategist using Pearson's, Spearman's rho and Kendall's tau-b correlation coefficients with significance set at 0.004 and 0.005. Creative Drive correlates with the Strategist and the Statesman according to all three types of correlation with a significance at 0.001 – 0.002 for the Strategist and 0.006 – 0.008 for the Statesman. Likewise, Dynamism displays a significant correlation between the personality trait and the leadership roles in all three types of correlation measurement with a significance at 0.002 for the Strategist, and 0.004 – 0.008 for the Statesman.

In regard to Structuring Capacity, Pearson's correlation agrees with Spearman's rho on a strong correlation with the Strategist and the Statesman, where Kendall's tau-b only has significance at the 0.01 level in regard to the Strategist. On the other hand, the trait Structuring Capacity has a negative correlation to the three roles with a significance exceeding 0.003 – 0.009.

Achievement Instinct and Preparedness for Change correlate highly significantly all over at the 0.01 level with the Entrepreneur and almost with the Strategist, except Pearson's for Achievement Instinct. The correlation between Achievement Instinct and the Entrepreneur is significant at the 0.004 – 0.007 level, and in relation to the Strategist at the 0.007 – 0.009 level. In all three correlation measurement methods,

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Preparedness for Change correlates to the Entrepreneur with a high significance at the 0.002 – 0.005 level, and the Strategist at the 0.005 – 0.010 level.

| Correlation at the 0.01 level between Developmental Leadership Roles and seven selected Personality Traits | | | | | | | | | |
|---|----------------------------|--------------|-----------------|------------------------|-----------------------|-----------------------------|------------------------|----------------|--------------------------|
| Correlations significant at the 0.01 level | | | Initia- tive | Crea- tive Drive | Ach. In- stinct | Adapta- tion Capacity | Prep. for Change | Dyna- mism | Structu- ring Cap. |
| Kendall's tau-b | No. 25 The Entrepreneur | Cor. Sig. | .205 .077 | .230* .048 | .332** .004 | -.155 .184 | .339** .004 | .193 .104 | -.239* .042 |
| | No. 26 The Strategist | Cor. Sig. | .322** .005 | .360** .002 | .313** .007 | -.288* .014 | .302** .010 | .369** .002 | -.314** .007 |
| | No. 27 The Statesman | Cor. Sig. | .211 .067 | .307** .008 | .246* .034 | -.232* .047 | .212 .070 | .336** .005 | -.297* .011 |
| Spearman's rho | No. 25 The Entrepreneur | Cor. Sig. | .244 .102 | .286 .054 | .417** .004 | -.193 .198 | .435** .002 | .245 .101 | -.308* .038 |
| | No. 26 The Strategist | Cor. Sig. | .408** .005 | .454** .002 | .381** .009 | -.365* .013 | .382** .009 | .450** .002 | -.396** .006 |
| | No. 27 The Statesman | Cor. Sig. | .286 .054 | .394** .007 | .307* .038 | -.298* .044 | .269 .071 | .413** .004 | -.384** .009 |
| Pearson | No. 25 The Entrepreneur | Cor. Sig. | .269 .071 | .310* .036 | .392** .007 | -.232 .120 | .406** .005 | .212 .158 | -.344* .019 |
| | No. 26 The Strategist | Cor. Sig. | .412** .004 | .458** .001 | .343* .019 | -.399** .006 | .407** .005 | .452** .002 | -.408** .005 |
| | No. 27 The Statesman | Cor. Sig. | .334* .023 | .398** .006 | .322* .029 | -.346* .019 | .306* .038 | .389** .008 | -.426** .003 |
| | | | N | 46 | 46 | 46 | 46 | 46 | 46 |
| ** Correlation is significant at the 0.01 level (2-tailed). | | | | | | | | | |

TABLE 44 CORRELATIONS AT THE 0.01 LEVEL BETWEEN SEVEN PERSONALITY TRAITS AND THE DEVELOPMENTAL LEADERSHIP ROLES, THE ØSTERGAARD SURVEY 2012

According to Pearson, Structuring Capacity is the personality trait that best fits the compiled roles with negative correlation followed by Creative Drive and Preparedness for Change with positive relations.

The measurement with Spearman's rho indicates Achievement Instinct as the best fit, followed by the negative correlation between Structuring Capacity and the compiled roles.

According to Kendall's tau-b, the traits Achievement Instinct and Creative Drive correlate best with the compiled developmental leadership roles.

Hence, both the Pearson and Spearman tests highlight the negative correlation between Structuring Capacity and the compiled roles, where the Spearman and Kendall tests both point at Achievement Instinct as the most important trait. As a result of all three measurement methods, the ranking of correlation between personality traits and developmental leadership roles of the cohort turn out as follows:

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Structuring Capacity (0.140; Negative correlation),
Achievement Instinct (0.151),
Creative Drive (0.164),
Preparedness for Change (0.214) followed by
Dynamism (0.386),
Initiative (0.401), and
Adaptation Capacity (0.645; Negative correlation)

The ranking is crucial for the interpretation of the entrepreneur and in creating learning objectives. In terms of generalization, all of the seven personality traits are equally interesting. In other words, the seven highly significant personality traits are relevant to generalize from along with the four theoretical traits: Autonomy, Exploration Drive, Preparedness for Change, and Self-preservation Instinct, where Preparedness for Change is duplicated.

7.4 ESSENCE OF THE ENTREPRENEURIAL LEADER

The intersection of leadership and entrepreneurship was selected as the best-suited research field to enhance knowledge of entrepreneurial leadership through an empirical investigation on entrepreneurs in order to reveal usable knowledge from the practical human perspective. The concept of entrepreneurial leadership involves both an entrepreneur conducting leadership in an entrepreneurial enterprise with employees and a leader in an organisation or business characterised by growth, initiative and change. Based on the research, the entrepreneurial leadership concept is outlined with an amending of personality factors and leadership behavioural details of importance.

If possible, the entrepreneur organises an environment suited for accommodating personal initiatives due to the fact that the sub-role of organisers is the condition under which to advance at a reasonable speed. However, Johnsen points out the differences between pure entrepreneur and inventor qualities: "The inventor finds new ways of doing things, or develops new things, whereas the entrepreneur puts them into motion, and takes on the risk. Where these two sets of qualities unite, new industries flourish" (Johnsen, 2002, p. 579). Hence, the correspondence between the personality aptitude Innovation Potential and leadership is pivotal in understanding the leading entrepreneurs.

7.4.1 INDIVIDUAL INFLUENCE IN LEADERSHIP

According to personality factors from the empirical investigation, the cross-check analysis indicates significance at the 0.001 level and 0.005 level for the three developmental leadership roles: the Entrepreneur, the Strategist, and the Statesman in relation to the aptitudes Leadership Potential and Innovation Potential, the functional categories Change Management, Growth, Power and Vitality, and the belonging personality traits in descending order: Achievement Instinct, Creative Drive, Preparedness for Change followed by Dynamism, and Initiative to be connected to the entrepreneur in general, and the entrepreneurial leader specifically. In addition, all three preferred leadership roles consist of developmental goal-setting and experimental problem-solving behaviour.

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Surprisingly, significant negative correlations also appear among the findings, such as Structuring Capacity, and Adaptation Capacity that enhance our knowledge on entrepreneurs in general. Moreover, the possibility of identifying an entrepreneur is enhanced by this negation, and similar the possibility of avoiding negative consequences due to the “dark side” or the vulnerable side of entrepreneurs.

In opposition to academic arguments for an entrepreneur spiralling upwards for a position as an elder statesman (Casson, 2010), this investigation found that individual entrepreneurs and entrepreneurial leaders are suitable for a diverse kind of entrepreneurial managing. However, the unique pattern of the individual tends to function as a precondition of how future entrepreneurial business or leadership position by choice will be designed.

Presumably, the knowledge of the pattern and the design process of the perfectly suited position is unconscious, but consciousness thereof will enhance the gain. For instance, instead of using the individual “default leadership role” in all situations, a conscious choice of the adequate leadership role for the purpose will indisputably promote the chances of the business surviving and thereby be an instrument for supporters to increase the survival rate of start-ups.

Moreover, the empirical findings display an innate preference for becoming self-employed, business owner or entrepreneur, in contrary to developing to become managerial business owners (Wennekers & Thurik, 1999), and diverse circumstances are responsible for inadequate positions in periods of life.

The literature review on leadership in the entrepreneurship literature and for entrepreneurship in the leadership literature revealed mainly topics at the firm level with corporate leadership and entrepreneurship, focused on small firms and family firms, but not on individuals except from case studies and indirectly in gender studies. Generally, the individual focus is absent, and only one article from the literature review mentions the intersection of leadership and entrepreneurship in the headline (Cogliser & Brigham, 2004).

In addition, the keywords were precise and illustrative to describe the authors’ view on leadership in relation to the entrepreneurial field and likewise to describe the focus of the journals. However, the individual focus was scarce and mostly covered by case stories.

7.4.2 A RENEWED DEFINITION OF ENTREPRENEURIAL LEADERSHIP

Regarding the entrepreneurial leader, the discussion about insufficiency of agreement on definitions is ongoing (Gupta et al., 2004), as with the definition of entrepreneurship, where there have been many suggestions and arguments (Bolton & Thompson, 2004; Gartner, 1990; Thompson, 2004), and thereby the whole phenomenon of entrepreneurship suffers from a shortage of conceptual framework (Shane & Venkataraman, 2000).

Thus, Kirchoff (1994) calls the managerial business owners, including many franchisees, shopkeepers and people in professional occupations, ‘the economic core’

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and regards them as the seedbed for the entrepreneurial ventures (Carree & Thurik, 2003, p. 437).

However, Lumpkin and Dess state that a small firm is an extension of the individual in charge and as such an outstanding vehicle to channel entrepreneurial ambitions (1996, p. 138). According to Wennekers and Thurik (1999), many terms like entrepreneurs, self-employed and businessmen are used indiscriminately in colloquial language and therefore lead to difficulties in operationalization and measurement. Based on the double dichotomy of self-employed versus employee and entrepreneurial versus managerial, they suggest using the terms Schumpeterian entrepreneurs in small firms, intrapreneurs and managerial business owners (Wennekers & Thurik, 1999), whereas the managerial business owner lacks the entrepreneurial mindset.

Consequently, a renewed definition of entrepreneurial leadership needs to evolve as displayed in Table 45.

| Evolving Functional Descriptions and Definitions of Entrepreneurial Leadership | |
|--|--|
| Cunningham and Lischeron (1991) | Entrepreneurial leadership involves setting clear goals, creating opportunities, empowering people, preserving organisational intimacy, and developing a human resource system. |
| Ireland, Hitt, and Sirmon (2003) | Entrepreneurial leadership entails the ability to influence others to manage resources strategically in order to emphasise both opportunity-seeking and advantage-seeking behaviours. |
| Gupta, MacMillan, and Surie (2004) | Leadership that creates visionary scenarios that are used to assemble and mobilize a supporting cast of participants who become committed by the vision to the discovery and exploitation of strategic value creation. |
| Thornberry (2006) | Leadership requires passion, vision, focus, and the ability to inspire others. Entrepreneurial leadership requires all these, plus a mindset and skill set that helps entrepreneurial leaders identify, develop, and capture new business opportunities. |
| Surie and Ashley (2008) | Leadership capable of sustaining innovation and adaptation in high velocity and uncertain environments. |
| Renko, Tarabishy, Carsrud, and Brännback (2015) | Entrepreneurial leadership entails influencing and directing the performance of group members toward the achievement of organisational goals that involve recognizing and exploiting entrepreneurial opportunities. |
| Johnsen (2002) | The Entrepreneur leader role initiates new activities based on an unquenchable flow of ideas. The Entrepreneur is able to make things connect and create synergetic value by formulation of the objectives for the alteration process, generation of the resources required by the alteration process' required resources, and development of the alteration itself. |
| Definition developed in this study | The entrepreneurial leader is a proactive individual who continuously launches and realises ideas. By positioning oneself with power, credibility and efficiency, the entrepreneurial leader demonstrates an ability to keep a dynamic balance of stakeholders and to execute the leadership process by developmental goal-setting, adequate communication and experimental problem-solving. |

TABLE 45 EVOLVING DEFINITION OF ENTREPRENEURIAL LEADERSHIP

Hence, the functional description of an entrepreneur and what the entrepreneur does, initiates and demands is explained (Renko, El Tarabishy, Carsrud, & Brännback, 2015) with two amendments; one of Johnsen (2002) and one of my own development in line with Gupta et al. (2004) and Johnsen (2002).

7.5 OUTER PSYCHOLOGICAL VARIABLES

Indeed, the entrepreneur as a human being experiences influences from the family, the society and the culture connected to the actual context and environment in which the entrepreneur is active. The notion is that imprint and upbringing is a cornerstone of a person's ability to act and to understand this act.

In order to pursue the research sub-question: *How do nature and nurture interact shaping the entrepreneurial personality*, the impact of external factors is further explored on how and why entrepreneurs enter the entrepreneurial process. Hence, this section focuses on selected key areas of education, ambition, family, role model, life-changing event, and launch triggering factor that are analysed and reflected upon through triangulated results from empirical research.

The key areas are selected based on knowledge from developmental psychology, social psychology, personality psychology and from personal experience with entrepreneurs as a psychologist, a principal depending on local businesses, a business promotion officer, and a researcher in the area of entrepreneurship. The investigation of the outer factors through the questionnaire promotes the mapping and identification of their relevance for entrepreneurs.

7.5.1 EDUCATIONAL BACKGROUND IN RELATION TO PERSONAL AMBITIONS

The educational background in relation to entrepreneurial business was examined from the 41 respondents who completed the questionnaire. The educational distribution outlines that more than half of this cohort has a medium length or longer education (61 percent), which is more than double any other level of education. A total of 14 percent run an entrepreneurial business with a non-formal educational background, and one quarter builds their business solely upon vocational or short education (24 percent).

In comparison, a general picture shows that 73 percent of entrepreneurs have none or a vocational education and 27 percent of the entrepreneurs a short, medium, or long education, which overall is similar to employees, where 71 percent have none or a vocational education and 29 percent short, medium, or long education (Dahl, Jensen, & Nielsen, 2009). Hence, this cohort is more educated compared to the general picture from 2006.

The educational background in relation to the launch of opportunity or necessity is displayed with majority in the third option in this research. The entrepreneurs launched their venture due to personal ambitions. Thus, the entrepreneurs with personal ambitions as the reason to launch a venture possessed a Long Higher Education (HE), short Higher Education (HE), Vocational Education, especially High School and Municipal Primary and Secondary School with no formal education.

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Only entrepreneurs with a medium length HE education background launch a venture due to an opportunity. Entrepreneurs with a Basic Vocational Education had an equal balance of opportunity motives and personal ambitions as the reason for launching a venture. None of the entrepreneurs in this cohort launched their venture due to necessity.

According to this survey, personal ambition is the main reason and additional explanations from the questionnaire’s open comment box include the following presented in Table 46.

| Reasons for an entrepreneur to launch a venture | |
|---|---|
| Open comment box answers | “A hobby developed to become an enterprise” |
| | “I acquired a part of the company where I was employed” |
| | “An opportunity turned up: A colleague suggested that we should launch an enterprise together. We did. The colleague left the enterprise after a year, and I continued and kept the business running” |
| | “It is equal parts of emerged opportunity, economic wishes and personal ambitions” |
| | “ to live out and try out dreams and theories” |
| | “It became too boring being an employed, and it was strenuous to watch unintelligent directors skim the cream” |
| | “In my marriage, it was necessary to stay at home; consequently I set up a business, but mostly due to ambitions” |

TABLE 46 REASONS TO LAUNCH A VENTURE, THE ØSTERGAARD SURVEY 2012

Regardless the need for further validation before generalising, then the added option “Launching due to Personal Ambitions” tends to be relevant. The cross table indicates that the less educated the individuals are, the more ambitious they are to become successful entrepreneurs. Moreover, long education seems to leave room for opportunity-seeking in specialized areas and occasionally as consultant due to loss of current employment.

7.5.2 LIFE-CHANGING EVENTS REQUIRE A PREPAREDNESS FOR CHANGE

A crucial environmental impact factor is life-changing events. Thus, the entrepreneurs were interrogated about events with the question: “Which events in your life (both positive and negative) have left particular imprints on which you are today?” The responses ranged from zero to multiple, and the explanations were clustered and checked for subjectivity. “None” were extrapolated and inserted.

The wide diversity of responses ranges from the succinct answer, “My upbringing” to comprehensive and detailed answers. Distinctively, the entrepreneurs interpret and change negative events into positive learning and strength from which they benefit today. For instance, “I was forced to be ‘the robust’ in my two marriages, which turned me into who I am today” and “The family’s financial adversities for a period: Acting very carefully – in economical dispositions”.

Hence, the survey confirms to some extent that entrepreneurs might come from a tough childhood (Kets De Vries, 1999).

The developed categories for the entrepreneur’s life-changing events in percentages are: Crisis, where the main responses are related to the death of close relatives (18%), job related experiences (14%), identity- and image shifts, from “Vietnam War” to “when I came out as gay”, but mainly dominated by having children (12%), epochs and courses, primarily answered such as “upbringing”, “marriage” and “being a parent” (11%), education (10%), psychological strain such as “my parents’ alcoholic problems” (7%), impact from others, generally the spouse (7%), development spring, for instance “changing from employee to employer” (6%), nothing (5%), changed lifestyle: “after travelling abroad” (4%), self-actualization such as “entering the board of directors” and “entering the political scene” (3%), and success and failure, which are described as “hits rock-bottom and start over again”, “to prove successful as self-employed”, and “to overcome shyness” (3%).

An extra grouping into fewer categories found that incidents is almost equal with long-term courses, where the new principal categories are: crisis and psychological strain (collected), positive changes (containing identity shift and image, developmental spring, and life style changes), success and peaks (self-actualization and success and failure), job and education (collected) plus long-term impact and courses (epochs and courses, impact from others and nothing).

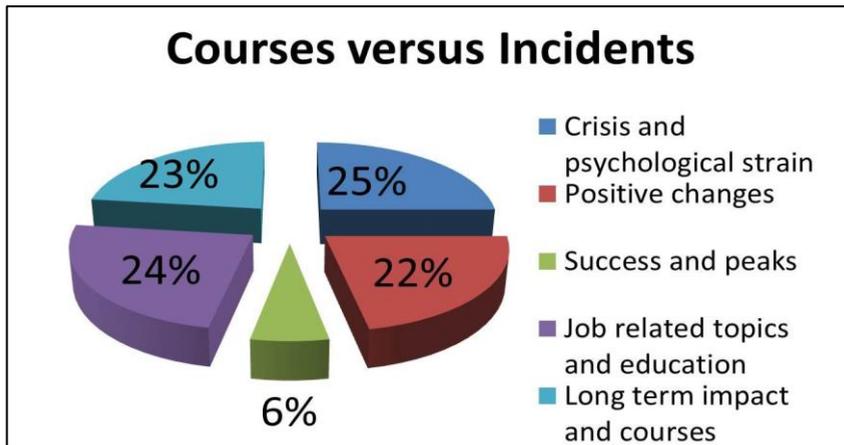


FIGURE 24 THE ENTREPRENEUR’S LIFE-CHANGING EVENTS, WEIGHTED, THE ØSTERGAARD SURVEY 2012

In the left hand side of Figure 24, the steady long-term impact of the environment represents 47% and is mainly characterised as courses. Most people endure long-term impact in a lifetime, even the entrepreneurs who mentioned they have had no events. The courses face the more surprising and often overwhelming events to the right in Figure 24, which also represent 47%. In the middle, failures appear with success and self-actualization, where the latter two enhance well-being (Siebert, 1983).

The survey results indicate that the entrepreneurial ability to be flexible and prepared for change is exerted in almost half of the most significant impacting events. Therefore, an entrepreneur needs the ability to be prepared for changes (Østergaard,

2003). Highly important to note, a fourth of these events are connected to negative experiences.

Certainly, sudden events challenge all kind of people, not only entrepreneurs, and this challenge demands energy, thoughts and efforts to deal with. However, the entrepreneur also deals with new initiatives in their businesses besides the ordinary and extraordinary life-events.

Accordingly, the entrepreneurial life consists of huge challenges and psychological changes to be continuously handled and turned into constructive knowledge that allow the entrepreneur to be ahead of competitors in regard of products, methods and concepts. In addition, the explanation why many entrepreneurs hardly celebrate a success could relate to the entrepreneurs tend to see successes and failures as a long line of natural steps forward.

7.5.3 INFLUENCE OF FAMILY ROLE MODELS

Investigating the balance of either innate or learned ability of entrepreneurs requires surveillance into the family pattern. Hence, the best source would be a DNA sampling or longitudinal research across generations. However, in this survey the 41 entrepreneurs were asked about family issues (see Appendix 1), for instance who their role model is to enhance our knowledge.

As an example of role model, one entrepreneur answered, “My father”, and continued answering in detail about the father’s birth, education, main employment, highest prioritised interest, and second highest prioritised interest with an accurate birthdate, the same education and employment as the entrepreneur and interests in, “The garden and music”. Similar responses were provided regarding the entrepreneur’s father’s mother about birth, education, main employment, and highest prioritised interest, and this particular entrepreneur answered again with the accurate birthdate, the education: “Cook”, main employment: “Owner of an open sandwich store”, and in relation to interest: “Needlework”.

Hence, this entrepreneur has very a close relationship to the family, and maybe therefore chose employment similar to that of the father and the father’s mother. Consequently, in all probability the family pattern impacts both by genes and imprint in this case.

In general, the family seems to impact the entrepreneurs’ life to a very high degree besides innate personality characteristics, education and other environmental subjects.

Using some examples of anonymised respondents, Table 47 demonstrates a proposal of a correspondence of family role models and family-related life-changing events. From these relatively few examples, the correspondence is high between having parents as role models and the perception of family as a valuable institution.

Additionally, when specific people are mentioned as role models, more specific events are mentioned as having an impact than in the family-related category. The abstraction level tends to be equal in both categories.

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| Role Model | Life-Changing Events |
|---|---|
| My parents | To meet my wife. It developed me socially to become a better human being :) Family I love my close family. They are always there for me as I'm for them. |
| My grandfather, and people I care about | The upbringing, where I had to show I was capable of doing something |
| Don't know, maybe my parents | Maybe my mother's disease |
| Parents and grandparents | To get children An intimate's death Travels Being together with the family |
| My first boss My maternal grandfather | To be alone with my mother as a child. To experience an alcoholic and violent stepfather from 5-8 years old To attend an independent boarding school for lower secondary students in the beginning of the nineties. To learn how to play music and act (beginning at the boarding school) To smoke too much pot and drink too many beers in High School and after hitting rock-bottom to rise up and rediscover the meaning of everyday life. To be a father and afterwards to be alone with my son. To attend the college of education To experience a nasty bankruptcy in the firm where I was employed To become self-employed the first time and experience how it succeeded. |
| None | To become a media presenter – overcoming shyness |
| Nobody particularly. Several family members and colleagues gave me essential viewpoints | Several deaths of family members in childhood. Positive experiences in the education system after primary school. Good (and one bad) leaders |
| ? | My wife, because she's always ready to talk or to review a problem. |
| None | Mainly various family patterns |
| Cannot remember anyone special. Different who together forms my own personal model | From I was quite young; it was obvious that I should be self-employed. Still got my first carbon copy book used to write an invoice to my class mates in 4th grade. Family: I have worked together with my sister for several years. Currently I have a venture with my oldest son. Previously, I had an enterprise together with my wife. |
| Bill Gates | The meeting with my parents-in-law, who had been self-employed most of their lives. |
| Donald E. Knuth | + 6 years in the military + 5 years abroad in US + To become a father - Undergo a major surgery with one of the children - Divorce |

TABLE 47 ROLE MODELS AND LIFE-CHANGING EVENTS CORRESPONDING, THE ØSTERGAARD SURVEY, 2012

Actually, a cornerstone of the entrepreneur's motives for their own learning is revealed through their preferred role models. Generally, individuals imitate and replicate behaviour. Behaviour based on imprint is learned by imitation or anti-imitation of role models combined with forced recommendations from caregivers.

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Imitation of role models supplements eventual talent development and needs to be considered along with motives for learning.

Thus, the entire cohort of entrepreneurs was asked which role models they have had during their life. The responses were collected and clustered into thematic categories: Family individuals (43%), celebrities (26%) such as the “Dalai Lama”, groups (17%) like “leading politicians”, and finally professionals (14%) with for example “my first boss”.

After the categorisation, the family role models were further specified and subdivided to reveal the entrepreneur’s preferences. The horizontal family members such as siblings and spouses composed 7%, where parents, consisting of mother, father, and both, dominated with 55% and grandparents, or responses like father’s mother, mother’s father, and both, followed at 38%.

Similar to all role models with 28% female role models and 72% male, the family role models appear to have a skewed gender distribution with the male role model as predominant: 16 concrete male family role models and 8 concrete female family role models in this particular cohort’s response. However, they appear to be determined by other than preferences due to gender of the entrepreneur.

As a result of several answers of “No role model”, an extrapolation was undertaken. The results indicate that one fifth of the entrepreneurs did not have any role model at all (19%), and the number of entrepreneurs without role models was almost the same as the amount of entrepreneurs having celebrity role models (21%). In this context, family role models represent 35% and, considering the number of answers, family members presumably remain the preferred role model for an entrepreneur.

7.5.4 TRIGGERING FACTORS ILLUMINATE THE ENTREPRENEURIAL PERSONALITY

The triggering event for launching a venture illustrates the entrepreneurial mindset; hence the question was incorporated as an open comment box in the questionnaire. An analytical categorization of the entrepreneurs’ own words provides three clusters as outlined in Table 48.

The triggering factors for launching a venture focus on three different areas. First, passion or desire as a profound motivation. Second, the natural next step in the entrepreneur’s personal development in line with Vygotsky. And third, a forced entering into being self-employed tightly connected to the development of the current workplace, and what is often described as an interruptive development, for instance due to bankruptcy. However, the latter is not comparable to being an entrepreneur due to necessity.

The cohesion is illustrated by this example of occupational development: “Dismissal from original occupation together with a wish of being self-employed instead of employed”. The example, in conjunction with the answer of life-changing event, illustrates the openness to new experiences and to follow own interest: “High school, discovering how much knowledge there is in the world. Choice of study, discovering that one could study one’s real interests.”

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| Three clusters of triggering event for launching own venture | |
|--|---|
| Desire | "My desire for inventing and developing" |
| | "Personal ambitions" |
| | "Interest" |
| | "A wish to follow the desire" |
| | "A belief in managing things better than my superiors did. Desire for liberation and new impulses" |
| | "Fancy trying. An illusion of more freedom" |
| | "Need for autonomy" |
| Personal development | "Generational succession with the launching of a new firm" |
| | "Tired of studying and together with my brother we initiated a good concept for a start-up business" |
| | "End of study and part-time job formed the basis of own venture" |
| | "Employment and support allowance" |
| | "That I started and succeeded" |
| | "Own ideas" |
| | "I worked from home when I got my grandmother's loom and changed the firm towards design of fabrics. It was quite new and I call it my invention" |
| Occupational development | "Counselling and networking gave me the opportunities" |
| | "Dismissal from original occupation together with a wish of being self-employed instead of employed" |
| | "The firm, where I was employed, went bankrupt" |
| | "Bankruptcy in a company where I was employed plus ambition" |
| | "Another start-up venture gave me the opportunity" |
| | "Closure of a company department in the town" |
| | "Opportunity to deliver a better service to other firms. Closure of previous workplace" |
| | "Got a good idea with 15-20 years of development time. Had the opportunity to work with the idea in my spare time. The idea turns out to be sustainable and came into more ideas. It rose. Became demanding, took plenty of my spare time. An innovation prize pushed the project forward, which kick-started the process of resigning from my secure employment and starting up alone" |
| | "Withdrew from a partnership offer, but chose to start up anyway" |

TABLE 48 THE TRIGGERING FACTOR OF LAUNCHING, THE ØSTERGAARD SURVEY 2012

Generally, the entrepreneurs turn negative events into personal development instead of "necessity versus opportunity" thinking. Often, the decision of launching a venture is the best choice out of several opportunities according to the entrepreneur. Hence, the entrepreneurs continuously seek solutions and useful outcomes.

7.6 DELIBERATE PRACTICE REINFORCE ENTREPRENEURIAL BUSINESS

In this section, entrepreneurial success by practice (Fabling & Grimes, 2007) provides a theoretical argument for talent development in the process of entrepreneurship. The empirical insights confirm the serial development of an entrepreneur and illuminate

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the potential roots of entrepreneurial success. In addition, a cross-investigation reveals a pattern that explains cohesion between entrepreneurial business and individual talent development followed by an explanation of how problem-solving becomes a tool towards the goal for the experienced entrepreneur.

The questions for this survey were designed with the basis of talent development understood as a combination of innate sprouts and many hours of deliberate practice because of necessity, interest or equally (Newell et al., 1958). The question is constructed without mentioning the word “talent”, because people generally think of talent very specifically as relating to competitive sport or music and not to common issues as for example solving problems. Besides, people initial become conscious about their own talent in the process of recognizing others struggle with what they easily accomplish.

The first open question on talent is: “I have noticed that I, compared to others, am especially good at: ___”. The answers turned out to be thoughtful, as a few examples demonstrate: “To inspire”, “to think around corners”, “to find new ideas and solutions”, and “to communicate”. The second question investigating talent development is: “During my life, I have spent at least 10,000 hours in the following areas: ___”. The third question is a parallel one, using 30,000 hours instead of 10,000 hours. Thereby, the development of entrepreneurial success is described in three levels: Talent, which is seen as innate; Expertise, due to 10,000 hours of deliberate practice; and last Elitism, representing 30,000 hours of deliberate practice.

A single example outlines the main picture of the individual’s serial answers on talent development as outlined in Table 49:

| Example of serial talent development | |
|--|---|
| Question | Answer |
| Talent I have noticed that I, compared to others, am especially good at: | 1. “Finding new creative solutions”, 2. “Thinking in three dimensions” and 3. “Analysing opportunities and finding diplomatic solutions”. |
| 10,000 hours During my life, I have spent at least 10,000 hours on: | “Drawing” |
| 30,000 hours During my life, I have spent at least 30,000 hours on: | “Design of new products” |

TABLE 49 EXAMPLE OF SERIAL TALENT DEVELOPMENT, THE ØSTERGAARD SURVEY 2012

All the answers of 30,000 hours are closely related to the current professional activity, as in this case, where the entrepreneur is an architect of industrial design. Since the results indicate a strong coherence between practice and profession, it is anticipated that deliberate practice for more than 10,000 hours impacts the livelihood of an entrepreneur. In general, it is suggested that extreme deliberate practice related to the

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core product of an entrepreneurial enterprise is crucial to achieve and maintain success.

A cross-investigation confirms the viewpoint and a business-related pattern. Since, some of the entrepreneurs gave many answers, others few or none, all answers were sampled in categories based on content and in accordance with the two other set of answers, controlled for subjectivity, and lastly converted to percentages for ease of comparison.

First, the talent answers are distributed into groups: Problem-solving (30%), People (28%), Ideas (23%), Leadership (12%), Entrepreneurship (5%), and Music/Creativity (2%). The latter three together equal less than one of the three major categories, and the groups IT and sport are non-existent in these responses.

The pattern changed regarding the topics of expertise related to more than 10,000 hours of practice. Now sport has the highest score with 32%, and IT and music/creativity comes second at 16% for each. Next is leadership with 13%, often answered with concrete experiences such as coaching in their favourite sports discipline and the like. Entrepreneurship (8%), ideas (10%) and problem-solving (5%) are often related to entrepreneurial activities that could be described as preparation for their current business, for example, "Solving technical problems". No one mentioned people-related subjects in this search.

For the last question on practice for 30,000 hours, where the entrepreneurs have gained elitist knowledge, skills and competencies, the main category is entrepreneurship, followed by IT, ideas and leadership equally, then sport and people. Problem-solving and music/creativity is not an issue. For this cohort, IT and entrepreneurship could as well be one category, since many bases their business on IT, and then the entrepreneurial business would directly occupy more than half, and even more if leadership was added as well.

At the elitist level with more than 30,000 hours of practice, the responses shift from the concrete activities in 10,000 hours like "Computer games" and "Preparing dinner" to more conceptual answers such as "Computer" and "Cooking". Thus, the conceptualization is partly explained by the time, often more than 10 years, in which an activity improves and varies. Opposite, concrete answers as diverse learning subjects develop naturally towards "Education" indicating an accumulation of previous learning activities towards an essence.

For instance, an Olympic athlete exercises strenuously, focusing on physical fitness, pace, and stamina along with practicing in the favourite discipline. In this way, the competencies in tangible efforts are transferable to other disciplines. For example, IT-competencies can be transferred to marketing with a focus on IT. Hence, the survival of start-up ventures depends on a flexible ability to transfer competencies into the core activity of the venture. Hence, the position is that practice beyond repetition is intimately linked to an individual's view of life and that also diverse outside factors, as supporting environment, influence success (Gladwell, 2008).

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Finally, an entrepreneurial pattern is revealed that emphasizes the cohesion of entrepreneurial elements in reality starting with a natural and joyful innate easiness combined with a tremendous the number of hours the entrepreneurs have used in deliberate practice of the primary constituents.

An example from the cohort in Table 50 demonstrates how profound talent development, life-changing events and profession are related, and it is assumed that this correspondence, in diverse versions, is true for almost every entrepreneur.

| Example of profound talent development in relation to business | |
|--|---|
| Question | Answer |
| Talent I have noticed that I, compared to others, am especially good at: | 1. "Transforming ideas/needs to real business/solutions", 2. "Assemble technologies" or 3. "Explore them creatively to solve concrete business problems in daily life". |
| 10,000 hours During my life, I have spent at least 10,000 hours on: | "Solving IT-problems/technological problems" |
| 30,000 hours During my life, I have spent at least 30,000 hours on: | "Programming" |
| Which event has left particular imprints (positive and negative): | "My choice of carrier. It meshes together everything I do every day and melts it together in my head – as me" |

TABLE 50 RELATIONSHIP OF TALENT DEVELOPMENT, ENTREPRENEURIAL BUSINESS AND LIFE-EVENT, THE ØSTERGAARD SURVEY 2012

Furthermore, it is suggested to be a fundamental cornerstone of a successful entrepreneurial business that the expanded leisure time interest transferred into professional activities is beneficial, especially according to the entrepreneurs' overall time-marshalling. As an example, one entrepreneur has a common thread through education, leisure time interests, and the income-connected activity in the entrepreneurial enterprise. Moreover, the highest prioritised interests turn out to be generally related to personal persistence, competition and receiving of new input, which is expected to vitalise and provide energy optimisation to the entrepreneurs' ability to succeed in business.

Hence, the theoretical findings arguing for entrepreneurial success by practice (Charan, Hofer, & Mahon, 1980; Fabling & Grimes, 2007; McCline et al., 2000; Walske & Zacharakis, 2009) are supported by the empirical results.

The respondents answer on talent, 10,000 hours and 30,000 hours of activity were also clustered according to Johnsen's leadership theory into the three categories problem-solving, goal-setting and communication (2002). The empirical results outline that preliminary knowledge explaining problem-solving later after being processed by 10,000 and 30,000 hours vanish as problems but instead becomes a tool towards the goal.

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The logic in using 10,000 hours and 30,000 hours on a specific activity is that it confirms how entrepreneurs use their innate talent and practice throughout life to succeed by integrating continuously developed interests from childhood in the entrepreneurial business. As an example, an entrepreneur with affinity to sail sport might end up as sail supplier worldwide in line with the twins Lars and Per Thrane starting with radio communication and ending with satellite technology (Østergaard, 2003).

Moreover, this analysis confirms that active vivid enterprises are based on the entrepreneur's private interest and talent. Hence, the traditional research on single elements in leadership, entrepreneurship and talent is suggested replaced with a future meritocratic perception in research that considers time and environment.

7.7 THE EMPIRICAL POINTS OF THE ENTREPRENEURIAL PERSONALITY

The main points from the empirical reflections concern three main subjects in alignment with the sub-questions leading to answer the research question.

First, the personality traits of active entrepreneurs are basic dispositions of becoming an entrepreneur and consist of ten personality traits. Four of them theoretical developed and empirical verified, and seven traits are extracted from the empirical findings with one overlap.

In addition, the empirical reflections are in line with the theoretical reflections arguing for a need of renewed typology of entrepreneurs. The cohort displays a deviation from where nine significant factor types has been revealed. The typology of entrepreneurs is suggested to be vital in regard of the entrepreneurial personality and will be further handled in Chapter 8.

Second, the leadership preferences of active entrepreneurs demonstrate an inevitable correspondence between leadership and entrepreneurs. Moreover, a triangulation demonstrates the innate disposition of leadership and innovation among entrepreneurs. The results display indisputable the preferred behaviour of entrepreneurs to be developmental goal-setting and experimental problem-solving along with the functional categories and personality traits of the two personality aptitudes.

Furthermore, the conscious time an entrepreneur practice the innate talent deliberate supplemented during life consolidate the foundation of the entrepreneurial business. The notion is that an entrepreneur's early interest develops to become the core of the entrepreneurial activity. Hence, conscious time marshalling is recommended.

Last, the environmental and contextual topics important to entrepreneurs have been discussed both theoretical and empirical throughout the comprehensive questionnaire. The findings outline the impact of family, and how to use incidents for personal development. Moreover, the entrepreneurial ability to turn failures and problems into opportunities are multiple illuminated.

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Finally, the well-being of entrepreneurs and their physical conditions are processed in different ways throughout the empirical findings with a twofold outcome: a recipe to overcome challenges and elements to be aware of in policy making and learning objectives.

PART III

Contribution and Conclusion

EMPIRICALLY-BASED THEORETICAL DEVELOPMENTS

In the last part, the threads are gathered from the theoretical reflections that have been examined empirically and discussed further. In Chapter 8, the contribution is delineated, and then presented in Chapter 9.

In general, the two concepts of nature versus nurture only seldom can be divided, as surroundings always impact an individual throughout life due to a complicated interaction of biological inherent possibilities and environmental forces. Hence, only two questions are relevant: First, which of the different genetic possibilities is actualised as a consequence of specific life events in the given physical, social and cultural environment? And second, which limitation is caused by the genetic constitution in relation to development of this particular personality? (Kluckhohn et al., 1953, p. 56).

Accordingly, the task is to identify the essential constituting factors of the personality and the environmental forces of importance in relation to becoming an entrepreneur and to develop as an entrepreneur. In fact, thorough considerations for optimal

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entrepreneurial development proved relevance and a need of recommencing among researchers, teachers, mentors and policy makers revealed.

In finding of the ideal personality attributes of the entrepreneur, the diversity in entrepreneurial behaviour is stressed continuously in studies (Ray, 1993). Moreover, launching and managing a new venture successfully requires both human and environmental resources (Baum et al., 2001) consisting of a multitude of factors such as upbringing, education, social contacts, cultural heritage, and work experience (Gedajilovic & Zahra, 2005). Hence, it was decided that one place to start was with the entrepreneurial personality itself.

Consequently, through analysis of theoretical arguments combined with empirical evidence, this research provides new knowledge, definitions, models and theoretical development that address the research question:

How is the entrepreneurial personality constituted?

Multiple results are presented in the reflection chapters that increase appreciation of and clarify the concepts. In order to establish building blocks for the consolidating analysis to answer the research question, the three sub-questions are addressed:

What is the psychological core of the entrepreneurial personality?

How do nature and nurture interact shaping the entrepreneurial personality?

What is the relationship between leadership and entrepreneurial personality?

In this third part, the essence from each area is brought together, inducing new insight into the traditional perception of the entrepreneurial personality. Hereby, the traditional view of the entrepreneurial personality is disputed as being more multifaceted.

Finally, the cross-sectional analysis creates a renewed psychological framing. Accordingly, the theoretical framing deals with entrepreneurial personalities that are distributed into three categories and four typologies of entrepreneurs. However, a deeper insight is provided alongside the sections in the last two chapters.

CHAPTER 8. CONTRIBUTION

“If I Were to Wish for Anything, I Should Not Wish for Wealth and Power, But for the Passionate Sense of the Potential, for the Eye Which, Ever Young and Ardent, Sees the Possible. Pleasure Disappoints, Possibility Never. And What Wine Is so Sparkling, What so Fragrant, What so Intoxicating, as Possibility!”

Søren A. Kierkegaard

The research indicates that each of the three areas: the psychological core, environmental influences and leadership, is pivotal to the foundation and development of the entrepreneurial personality. Moreover, their intertwined relationship fosters detailed insights and reveals current theoretical contributions towards the academic discussion. Thus, the research question addresses the personality subject in depth, including the process and the diversity of the external influences and the issue of leadership in relation to understanding the entrepreneurial personality.

The main purpose of this research was to investigate the essential question *“How is the entrepreneurial personality constituted?”*.

The research involved the entrepreneur at an individual level, the concept of personality, the definition of an entrepreneur, typology within entrepreneurship, and a clarification of the core entrepreneurial attributes and factors by specifying environment and leadership.

Thus, the sub-questions address the personality in depth, the internal versus the external key factors, and how leadership relates to the entrepreneurial personality. The sub-questions are processed collectively as threads towards answering the research question.

First, the entrepreneur definition is renewed followed by an investigation in the psychological substance in the entrepreneurial personality traits. In correspondence with the factor analysis, the four entrepreneurial types are interpreted and explained. Next, the psychological variables are suggested to be continuously developing as a psychological variable wheel.

In continuation, the entrepreneurial personality is further investigated through the three sub-questions. The sub-questions of the core personality, the balance of nature and nurture and the importance of leadership are each answered thoroughly in respective sections towards answering the main research question.

The theoretical reflections, empirically verified, induce a contemporary model of the entrepreneurial personality scope with personality traits in the centre as a response to the main research question about the constitution of the entrepreneurial personality underlined with a definition.

Finally, before proceeding to the conclusion, the additional points are shortly outlined followed by conclusive considerations in regard of previously, current and future measurement methods and instruments. Last, the discussion clarifies the genuine entrepreneurial personality illuminate and expound the four typologies: the Synnovation Creator, the Team Entrepreneur, the Adventurer and the Rebel.

8.1 A DEVELOPED DEFINITION OF AN ENTREPRENEUR

In regard to the research question *How is the entrepreneurial personality constituted?* the definition of an entrepreneur is pivotal. Hence, the entrepreneur as a concept is pursued by the abductive method with departure from the working definition that was built on Hébert et al. (2006), Carree and Thurik (2003, p. 437) and the classic perception of an entrepreneur by Schumpeter: “The entrepreneur is a person who undertakes responsibility for a challenge, job or task which includes both being in charge and in action” (see section 3.1.2).

However, the general interpretation of an entrepreneur as an idea generator should be applicable to a renewed definition of an entrepreneur. Particularly when relating the description of an entrepreneur to occupational issues the innovative factor of an entrepreneur needs to be emphasised further. Accordingly, the definition of an entrepreneur requires amendments, and the working definition of an entrepreneur is adjusted to:

The entrepreneur is defined as a person who undertakes and *innovates* a challenge, job or a task, whilst being in charge and in action.

However, without limitation by vocational choices, opportunities or coincidence, a fully developed definition of an entrepreneur also need to be founded on personality coherence and leadership characteristics, and thereby the time limitation is partly addressed. In line with Schumpeter, the definition of an innovative entrepreneur can be improved with the knowledge of the entrepreneurial personality (Andersen, 2011).

Hence, a more detailed definition better supports research and policy-making when it consists of more than one variable, as it is neither a single personality trait, a motivation factor nor a behavioural detail that identifies an entrepreneur (Aldrich & Martinez, 2001; Low & MacMillan, 1988; McClelland, 1987; Sexton & Bowman, 1985).

Generally, the descriptions of the entrepreneur as an individual improve by the use of psychological and sociological terminology in the interest of avoiding misinterpretation.

However, it implies a differentiation between the personality traits, the motives, the characteristics, and the competences besides distinguishing between changeable elements and stable elements surrounding the entrepreneur. For instance, the entrepreneurs are influenced differently by the psychological variables such as time and environment, and the psychological invariables called personality traits that are

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relatively stable and exhibit regularity through generations such as a homogeneous business talent of mother and daughter (see Figure 5).

The final and developed definition of an entrepreneur, which is also confirmed by the significant empirical personality results, is stated as follows:

DEFINITION 12 OF THE ENTREPRENEUR

The entrepreneur is capable in thought, perception and behaviour to undertake responsibility for multiple sorts of challenges and to succeed by innovating along with others.

The definition encompasses several elements. The meaning of the word “capable” covers being able to, knowing and doing something. It can be an unconscious expectation in situations without prior experiences; however, unconscious is not equated with being over-confident or overly optimistic.

Second, innate potential as the foundation of entrepreneurial activity is integrated with thought, perception and behaviour that stem from the personality definition as presented in subsection 3.2.1.

Third, the leadership perspective is covered in the words “undertake responsibility” and the variation in the readiness for multiple sorts of challenges besides the role of leading “others” towards a goal.

Fourth, the word “challenges” is used instead of “obstacles” due to the preferred entrepreneurial experimental problem-solving as presented in section 6.5. Success is subjective, but “to succeed” requires perseverance and mutual adjustments from crucial environmental impact which are collected and used in an inspiring new combination.

Fifth, innovating means launching new methods or ideas that had not existed before a specific entrepreneur discovered the possibility.

Finally, “along with others” integrates the fact that an entrepreneur might work alone or have employees in periods for various reasons, but an entrepreneur always includes customers, friends and family, and suppliers as a prerequisite for sustainable entrepreneurial changes.

The above definition of an entrepreneur is usable for the links between entrepreneurship and growth, when it is understood as creating new solutions, radical changes and problem-solving. According to Baumol (1993), the dynamics of perceiving and creating new economic opportunities requires more attention, and the key contribution of entrepreneurs to economic growth is the newness. Moreover, the current definition includes the starting of new firms and the transformation of inventions and ideas into economically viable entities driven by entrepreneurs, the ones who create or operate a firm (Baumol, 1993b, p. 198).

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The theoretical processing of the definition covers the nature-nurture discussion and the avenues of vocational relations and time relations. The notion is that an entrepreneur is a complex individual consisting of the entrepreneurial personality including behaviour, leadership involving goal-setting, adequate communication and problem-solving, and access to different kinds of resources such as learned knowledge and supportive relationships.

In fact, the proposed definition of an entrepreneur is intended to simplify future theoretical and empirical approaches to entrepreneur research.

8.2 PSYCHOLOGICAL SUBSTANCE IN THE ENTREPRENEURIAL TRAITS

In regard of the research question *How is the entrepreneurial personality constituted?* the personality substance is pivotal. However, the complexity of the personality requires a processing in multiple steps. In this section, the factor analysis sheds light on differences of innate personality among the group considered as entrepreneurs.

In comparison with the distribution from Hisrich et al. (2007), the factor analysis in section 5.2 reveals new information in regard of entrepreneurial types. Hence, the typical entrepreneur characterised as a craftsman, work related, and nascent entrepreneur is further described by Factor One – The Synnovation Creator. The inventive dreamers seem to have much in common with Factor Six – The Opportunist. Moreover, the potential entrepreneur is well described by Factor Seven – The Rebel, and Factor Eight – The Adventurer.

There is no evidence from the empirical findings that support a differentiation between ordinary entrepreneurs on one hand and on the other female, retiree, and fatherless entrepreneurial types. However, the team-oriented entrepreneurs are well characterised by Factor Four – The Team Organizer. From the factor analysis, a deeper insight into Factor Three – The Desperate Survivor seems to be needed, and likewise the learning from the contradictions to entrepreneurial types exemplified by Factor Two – The Administrator, Factor Five – The Bag Carrier, and Factor Nine – The Routinized Employee.

The notion is that a typical entrepreneur corresponds to Factor One – The Synnovation Creator, who is characterised by a remarkable drive and interest in the innovation process as a social activity designed and managed by the entrepreneur. The Synnovation Creator is aware of the importance of group processes and the synergetic power connected to the dedicated group members. In this way, The Synnovation Creator stimulates employees or other human resources committed to the innovative purpose with lots of attention, care and motivational effort.

Beyond that, the inventive dreamers corresponding to Factor Six – The Opportunist are characterised by a high degree of tolerance and flexibility, and a disposition to take risks and find new solutions while overcoming obstacles. At the same time, the Opportunist takes no interest in personal involvement, care and responsible commitment towards others or a stable social life. The results of the Opportunist are primarily coincidental due to an unengaged and unpretentious target setting.

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In addition, the potential entrepreneurs are described by first the anti-authoritarian Factor Seven – The Rebel, who takes on confrontations whenever and wherever they are, often based on emotions and impulsive reactions. Thus, the Rebel with the big ego and low empathy is always ready to take on new confrontations that are not reflected in a deeper analysis, but in a conviction that necessary decisions have to be made no matter the inevitable risks. The Rebel follows the motto that “the end justifies the means”. The other potential entrepreneur is described by Factor Eight – The Adventurer, who with continuously rotating mental radar is constantly looking for new experiences, new possibilities and new solutions. The Adventurer is a curious and independent person, who has a true interest in exploring the world and is not necessarily driven by a specific goal or a specific plan. The Adventurer is a passionate, dynamic and impulsive person who is able to cope with obstacles and carry out the necessary decisions.

The team entrepreneurs are further described and characterised by Factor Four – The Team Organizer, who feels morally committed to improving the world socially, preferably by following a program or a script instead of adapting via flexibility and tolerance. The Team Organizer is characterised by a passion for the purpose, high empathy and a high structuring capacity. The motivational driver is visible measurable results from one’s own effort and from being dedicated, efficient and reliable in the team.

Of course, the present typology needs further revision due to this theoretical development in agreement with the empirical findings.

An overview of the entrepreneurial types in regard to the factor analysis is provided in Table 51 by emphasising the strengths and the weaknesses of the entrepreneurial types in valid and reliable psychological terms.

Hence, the most vital personality traits related to each factor type are distributed in accordance with a psychological evaluation into strengths, weaknesses, or both to get an overview of the person behind the factor type. Both sides of the coin are in play concerning personality, and as a result, based on the exact distribution of personality traits, categories and potentials, the entrepreneurial types’ strengths and weaknesses are also characterised by conceptual descriptions in order to demonstrate the dark side as well.

Thus, in a discussion of the “dark-side” of the personality traits, Miller (2015b) raises points about the role of personality traits in the formation and success of entrepreneurial enterprises, and suggests the possibility, based on his observations, that many of the traits leading people to become entrepreneurs, when taken to extremes, can lead to their failure. Individuals with low scores on these traits will never venture out to become entrepreneurs, but individuals with high scores will try and fail according to the logic of inverted U relationships (e.g., Grant & Schwartz, 2011).

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As a result of the content in Table 51 regarding strengths and weaknesses, along with the previous theoretical discussion, a distribution is suggested:

| Imaginary – Entrepreneurs |
|--|
| <p>The Bag Carrier The Bag Carrier is, in a psychological interpretation, a deeply socially dependent individual adhering to the opinions and ideas of influential people, and who constantly fits and adapts to the current social environment. This focus on adaptation is the life target of the Bag Carrier due to the absence of self-confidence, decision-making, risk-taking and the will to fight for own survival. The Bag Carrier obtains success through a submissive and conforming collaboration with the most powerful authorities.</p> |
| <p>The Opportunist From a psychological perspective, the personality of the Opportunist is characterised by a high degree of tolerance and flexibility, accompanied by a disposition to take risks and find new solutions while overcoming obstacles. At the same time, the Opportunist takes no interest in personal involvement, care or responsible commitment towards others or a stable social life. The results of The Opportunist are normally coincidental due to an unengaged and unpretentious target setting.</p> |

TABLE 52 THE CHARACTERISTICS OF THE IMAGINARY-ENTREPRENEUR INDIVIDUAL BASED ON THE FACTOR ANALYSIS

However, the types in the imaginary-entrepreneurial category in Table 52 will increase in number concurrently with the inclusion of cohort members from outside entrepreneurial activity, for instance cohort of students. This table serves first and foremost to visualize the characteristics and is therefore withdrawn. In addition, due to the current popularity of being an entrepreneur (at least in Denmark), attention should be paid to the opportunistic entrepreneur, who lacks the necessary personality traits to succeed, but could easily manage to derive financial support from authorities.

| Self-employed |
|---|
| <p>The Administrator Psychologically, the Administrator is characterised by very high personal stability, social responsibility, systematic mindedness, and a preference for order, target retaining and following "business as usual". Generally, the Administrator avoids risk-taking and creative activity.</p> |
| <p>The Routinized Employee The Routinized Employee is, from a psychological perspective, a self-employed individual or freelancer, who works diligently to achieve an outcome from the everyday routines and tends to avoid risk. Curiosity, passion and vision are all limited to a minimum level. Furthermore, the Routinized Employee is characterised by a scarcity of mental power and self-confidence. Hence, the Routinized Employee is a controlled and self-organized person who is able to understand other people but with no real interest in using this knowledge constructively in motivational processes or other ways.</p> |

TABLE 53 THE CHARACTERISTICS OF THE SELF-EMPLOYED INDIVIDUAL BASED ON THE FACTOR ANALYSIS

Table 53 displays the factor types with only few initiatives and are therefore better affiliated with self-employed in contrary to the entrepreneurial factor types in Table 54 that display the most prosper entrepreneurial types in entrepreneurship.

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| Standard Entrepreneurs |
|---|
| Well-functioning Entrepreneur |
| <p>The Synnovation Creator</p> <p>From a psychological perspective, the entrepreneurial profile of the Synnovation Creator is characterised by a remarkable drive and interest in the innovation process as a social activity designed and managed by the entrepreneur. The Synnovation Creator is aware of the importance of group processes and the synergetic power connected to the dedicated group members. Thus, the Synnovation Creator stimulates employees or other human resources committed to the innovative purpose with lots of attention, care and motivational effort.</p> |
| <p>The Team Organizer</p> <p>In a psychological interpretation, the Team Organizer feels morally committed to improve the world socially, preferably by following a program or a script instead of adapting via flexibility and tolerance. The Team Organizer is characterised by a passion for the purpose, high empathy and a high structuring capacity. The motivational drivers are visible measurable results from one's own effort and being dedicated, efficient and reliable in the team.</p> |
| Imperfect Entrepreneur |
| <p>The Rebel</p> <p>The Rebel is, from a psychological interpretation, an anti-authoritarian type, who takes on confrontations whenever and wherever they are, often based on emotions and impulsive reactions. Thus, the Rebel with the big ego and low empathy is always ready to take on new confrontations that are not reflected upon in a deeper analysis but from a conviction that necessary actions have to be taken no matter the inevitable risks. The Rebel follows the motto that "the ends justify the means", but also the more harmless "I will show them otherwise".</p> <p>Needs a trustworthy partner or mentor</p> |
| <p>The Adventurer</p> <p>The Adventurer is constantly looking for new experiences, new possibilities and new solutions. The mental radar is continuously rotating. The Adventurer is a curious and independent person who has a true interest in exploring the world and is not particularly beholden to a specific goal or a specific plan. The Adventurer is a passionate, dynamic and impulsive person, who is able to cope with obstacles and carry through with the necessary decisions.</p> <p>Needs goal-orientation from time to time</p> |
| Desperate Entrepreneur |
| <p>The Desperate Survivor</p> <p>From a psychological standpoint, the Desperate Survivor is a disillusioned, frustrated and mentally injured person, who struggles with a code of practice in advocating for new ideas and inventions. The Desperate Survivor still retains traces of a dynamic and rebellious behaviour in the personality, which indicates a weak option of being a fighter and suggests the entrepreneurial recipe of coping with critical conditions. The Desperate Survivor is a vulnerable and insulating individual with a low stress tolerance, low self-control and no interest in social obligations.</p> <p>Needs whatever they ask for</p> |

TABLE 54 THE CHARACTERISTICS OF THE ENTREPRENEUR TYPOLOGIES BASED ON FACTOR ANALYSIS

All in all, the factor analysis distinguishes between imaginary-entrepreneurs, self-employed individuals, and entrepreneurs divided into three subgroups: well-

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functioning entrepreneurs, imperfect or potential entrepreneurs, and desperate entrepreneurs.

After removing the imaginary-entrepreneurs, the remaining two categories are the self-employed and the standard entrepreneurs with subgroups. In consequence of the inevitable issue of leadership emerging from this survey, a third category is suggested as improvement.

The third category is found through the analysis that processed the intersection of leadership and entrepreneurs: the Business owner. The Business owner is characterised as an individual with less innovation but more leadership personality than an ordinary entrepreneur.

8.3 FOUR ENTREPRENEURIAL TYPOLOGIES BASED ON TRAITS

In consequence of the differentiation among entrepreneurs in traditional sense into three categories, the typologies in the entrepreneur category are further advanced in this section.

Enhancing the entrepreneurial performance is beneficial for society, the commercial environment, business angels, and professional entrepreneur teachers and naturally also for the entrepreneur. The analysis so far on the entrepreneurial typology reveals pedagogical challenges such as how to assist and ease a desired development from a potential entrepreneur towards a well-functioning entrepreneur and especially how to move a desperate entrepreneur towards well-being and well-functioning.

Hence, based on the presented factor analysis results, the preferred leadership role behaviour, and the influence of environmental context, a conclusive and accumulated psychological interpretation is conducted. However, future research may bring about additional amendments and suggestions on educational devices and foci than provided here for both the well-functioning and the imperfect entrepreneur.

8.3.1 THE SYNNOVATION CREATOR

Ideally, the Synnovation Creators fend for themselves. However, a real entrepreneur is most likely to match up till 80% with one of the typologies. Hence, the obvious educational effort would be to focus on the lacking traits or on strengthening the weak traits. In fact, learning the hard way as well as learning by shortcut is a universally human task and matches the Synnovation Creator's own learning pace.

Due to the contraction of synergy and innovation in "Synnovation", both of the two elements impact the Synnovation Creator and need almost equal attention. In supporting the innovative and creative part of the Synnovation Creator, usable methods should be drawn from the fields of innovation and creativity to make the entrepreneurial outcome flourish (Johnsen, 2002, p. 579).

According to synergy, basic learning begins with the origin of the concept from the thoughts of Ruth Benedict that emerge from the notes of her students:

“I shall need a term for this gamut, a gamut that runs from one pole, where any act or skill that advantages the individual at the same time advantages the group, to the other pole, where every act that advantages the individual is at the expense of others. I shall call this gamut synergy, the old term used in medicine and theology to mean combined action. In medicine it meant the combined action of nerve centers, muscles, mental activities, and remedies, which by combining produced a result greater than the run of their separate actions. I shall speak of cultures with low synergy, where the social structure provides for acts that are mutually opposed and counteractive and of cultures with high synergy, where it provides for acts that are mutually reinforcing“ (Maslow, Honigmann, & Mead, 1970, p. 325-326).

In line with Ruth Benedict’s definition, the Synnovation Creators combine the actions of themselves and others and produce greater results than expected. Further, the Synnovation Creator establishes an innovative synergetic environment which attracts many people, particularly other creative and innovative people. Even though the Synnovation Creators often seek equal giants, they essentially need to be self-reliant. However, the Synnovation Creator prospers by meeting or being introduced to a trustworthy mentor from an early start according to their weakness. In this respect, several specific elements are essential for the Synnovation Creator: the pace; the quality, size, and amount of the entrepreneurial production; and their own welfare. The solutions are quite simple: a parental role model and caretaker, a skilled teacher providing new relevant material in the footsteps of Vygotsky (e.g., Bruner, 1984; Chaiklin, 2003; Tudge, 1992; Vygotsky, 1997), an emphatic superior willing to let the entrepreneur test the boundaries, an egalitarian partner or spouse, and a stimulating and well-organized environment. However, the simplicity vanishes in the attempt to provide these solutions, for example, in the absence of desired support and supporters then substitutes are required. The Synnovation Creator needs constantly updated information to produce synergy, which is why this entrepreneurial type is dependent on many, various and willing supporters.

8.3.2 THE TEAM ORGANIZER

The Team Organizer, on the other hand, focuses on how people in the surroundings thrive even more than on achieving their own goals. In fact, the discussion concerning this type should concentrate on whether risky businesses are worth the effort. The Team Organizer seeks a work-life balance, as opposed to Schumpeter’s definition of the entrepreneurial behaviour challenging the ideal state or the equilibrium (Andersen, 2011; Schumpeter, 1931; 1934; 1939). However, the behaviour of the Team Organizer could also be described as behaviour towards a higher level of equilibrium in harmony with the changes of society and in readiness for the future. This kind of behaviour relates to someone with the ability to be in the lead.

Indeed, it is a problematic affair claiming that an entrepreneurial personality type has a weakness, because personal experience of small successes based on low risk affects the current level of risk willingness and thereby nudges the entrepreneur in a new direction. Likewise, a desperate entrepreneurial type with a Team Organizer potential would advance by attending a supportive entrepreneurial environment. Consequently,

the societal investment into incubation parks and similar national growth programs and consultancy is ideal for this type of entrepreneurs. From time to time, life-changing events naturally induce the same effect, such as layoffs, serious diseases, traveling around the world, winning competitions, and fortunate coincidences. If possible, a coaching process would be a beneficial method to encourage development from a potential towards a fully developed Team Organizer.

8.3.3 THE REBEL

The entrepreneurial type with the assumed best potential to profit from learning is the Rebel. The ability to execute decisions on a fragile foundation is essential for a leader, an entrepreneur and an innovator, but execution of decisions on only a hunch and a feeling or out of stubbornness barely make progress. However, the latter describes the Rebel, which is why a learning process encouraging reflectiveness would almost certainly help them progress. Accordingly, the cornerstone in supporting the Rebel in their own personal development requires specific skills from “the teacher”. Primarily, the adviser must be respectable due to experience, proved and visible success, intelligence, education, results, and knowledge. Hence, the Rebel prefers celebrities as mentors not only because they are well-known but because they are provable successes and therefore worthwhile to respect and learn from.

In order to support a talented entrepreneurial type such as the Rebel, one has to find the best in the field for mentoring. Since the nature of entrepreneurial activity is novelty, an entrepreneur needs several mentors from different scientific or practical fields to cover the launching of a new product. Thus, connections between universities and entrepreneurial societies like Silicon Valley benefit this entrepreneurial type. If the diversity in the environment is sufficient and supportive in standards, then the entrepreneurial rebels presumable tend to pick their mentors by themselves.

In reality, workplaces and educational institutions have to deal with these powerful types and teach them even when they not listen and obey. In these situations, the learning challenges is recognisable: The entrepreneurial Rebel would profit utmost by acquiring the necessary skills themselves, but might not be able to without some aid, and the main task for the society around the entrepreneurial Rebel is demanding in maintenance of the qualities concurrently with straighten up the less fortunate parts of the entrepreneur. For instance, the Rebel’s ability to induce novelty and innovation in thoughts and behaviour versus their lack of objectivity, analytical capacity and reflectiveness is puzzling. Moreover, the negative empathy means that the entrepreneurial Rebel cares less about human beings, and as a partner one risks being let down. The entrepreneurial type the Rebel seems to be less rebellious with age, however, the likelihood is that the change is owed to learning from numerous setbacks. Hence, The Rebel seldom avoids failures, bankruptcy, loss or betrayals due to their rebellion personality.

8.3.4 THE ADVENTURER

On the contrary, the happy-go-lucky entrepreneurial type radiates dynamism, charm and childish naiveté. The Adventurer attracts “mature” supporters automatically. However, the more self-assuredness the Adventurer possesses, the less support is

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offered, which is why they often experience loneliness and exhaustion. In general, the Adventurer lacks self-control and stability and follows their latest impulse, which is a trial for those around them. The Adventurer usually encounters dilemmas: they want competent feedback but move on too quickly to experience steady and deep insight from professional discussions; they prefer a happy environment, but their curiosity and rapid perception constantly brings them to the edge, where they have to convince others; and in general they experience a natural resistance towards their ideas that are far beyond “normality”.

However, the entrepreneurial type the Adventurer also needs support from time to time. Society gains from solving this problem. The likelihood of this entrepreneurial type maintaining the daily operations of a business is almost non-existent. Likewise, the support must be congruent with the nature of the Adventurer as someone to lead in business development, charting new avenues and paths. Hence, the Adventurer is best supported by similar entrepreneurial types with surplus energy and rapid thought processes mindset, not necessarily from the same field but with a mental backpack of experiences to learn from. Opposite of the Rebel, the Adventurer receives advice, knowledge and conducts progressive dialogues. The curiosity, however, forces the Adventurer to continue the leading track, because they learn quickly by transferring knowledge from previous experiences to the current activity. Hence, it is irrelevant for The Adventurer to wait for support unless the mentor, the teacher or the superior is more skilled in the specific field. More pragmatically, they often need a manager to team up with.

Generally, the challenge of supporting entrepreneurs requires that teachers, politicians, and business developers first scan the surroundings to spot and select upcoming entrepreneurial talents, investigate the individual's preconditions thoroughly for the entrepreneurial endeavour and establish support in a diversified entrepreneurial environment with a fashionable and distinguished network from which the precisely suitable support can be selected and allocated for the specific entrepreneur.

In contrast, homogenous advice supports self-employed individuals well, for instance concerning uniform difficulties in starting up, and can successfully be repeated in a wide geographical area.

8.4 ENTREPRENEURS PSYCHOLOGICAL VARIABLES INFINITELY DEVELOP

In continuation of the guidance of the four entrepreneurial types, the general development of entrepreneurs is illustrated through the psychological variable wheel in this section. The unavoidable changes in the psychological variables of regular entrepreneurs are an enduring process, the process of entrepreneurship.

Entrepreneurial development is highly individual and varies due to the individual's background and goals which shape their activity. Contrary to the common conception of an entrepreneur being a serial entrepreneur, an inventor, or a CEO, Table 55 underneath displays a varied picture of how the entrepreneurs describe their activity in their own words.

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| Examples of the current activity of the respondents |
|---|
| "A development enterprise" "3 enterprises, 1 holding company, 1 consulting firm, and 1 entrepreneurial" "design and product development since 1997" "IT, Owner, Software" "Law firm" "Business partner with three other agencies" "Medico 100 % and a production enterprise 20%" "Active in 4 operating companies plus 1 holding company" "Director in 1 firm having a patent assignment which is still ongoing" "1" "IT, strategy & development from 2011 until now, Director" |

TABLE 55 EXAMPLES OF ENTREPRENEURS' CURRENT ACTIVITY, THE ØSTERGAARD SURVEY 2012

On the subject of learning programs and policy making, these examples need to be considered in scheduling future programs to meet the varied conceptions of entrepreneurial business activity. This observation indicates that some entrepreneurs invent and operate a business, while others invent, operate and collaborate in a hodgepodge, and, moreover, that most of the entrepreneurs deal with their entrepreneurial activities somewhere in-between. Hence, the interpretation of entrepreneurial growth should be multi-faceted as well. In some cases, the growth is measurable in number of employees, in other cases number of ventures, but enriched in number of associated freelancers and partners.

In general, the research results suggest that entrepreneurial talent and talent development reveals qualified knowledge. However, scholars must distinguish between the psychological invariables, which are steady, and the psychological variables, whose impact changes during life.

The empirical results from the Østergaard Survey 2012, where the empirical investigation outlined the development of entrepreneurial talent, are supported by the theoretical findings that argue for entrepreneurial success by practice (Charan et al., 1980; Fabling & Grimes, 2007; McCline et al., 2000; Walske & Zacharakis, 2009).

The first main factor is the time used with passion in an active and natural environment, in the footsteps of Simon and Newell (1971) and Ericsson in diverse cohesions (Ericsson et al., 1993; Ericsson, 2007; Ericsson, Nandagopal, & Roring, 2009b).

Secondly, the talent should be spotted at a very early age in order to develop the talent to its full potential and to ensure practice, since the loss of a natural talent is very hard to recover (Ericsson et al., 1993). The talent development appears to connect with the individual entrepreneur's professional possibility of achieving success in the entrepreneurial field.

And thirdly, in order to understand, interpret and assist with talent development, it is necessary to distinguish between the psychological variables and the psychological invariables of personality attributes as previously mentioned. Simon et al. (1987)

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found that experts use a system where they form groups of interrelated information into chunks. In particular, the ability to ignore irrelevant patterns and focus on relevant and critical patterns seems to be a shortcut to successful coping the challenges (Chase & Simon, 1973; Newell et al., 1958; Newell & Simon, 1972; Prietula & Simon, 1989; Simon et al., 1987).

In other words, talent is defined as a combination of analysis and intuition, where intuition builds upon accumulated sub experiences, which form patterns over time. Additionally, Francoys Gagné (2007) describes three main categories that can be used to guide academic talent development: target identification, intervention modalities, and realistic expectations and alter native life goals. According to Gagné, development of entrepreneur talent is an “Extracurricular Activity” similar to chess, astronomy and computers. Generally, scholars agree that there are people who are more talented than others. Furthermore, Drucker (1998) agrees with Gagné that the talent often lies in well-defined areas.

Figure 25 displays an example of how Figure 5 proceeds for an entrepreneur and the psychological variables changes colour²⁰ in relation to how the thought perception of an entrepreneur would be.

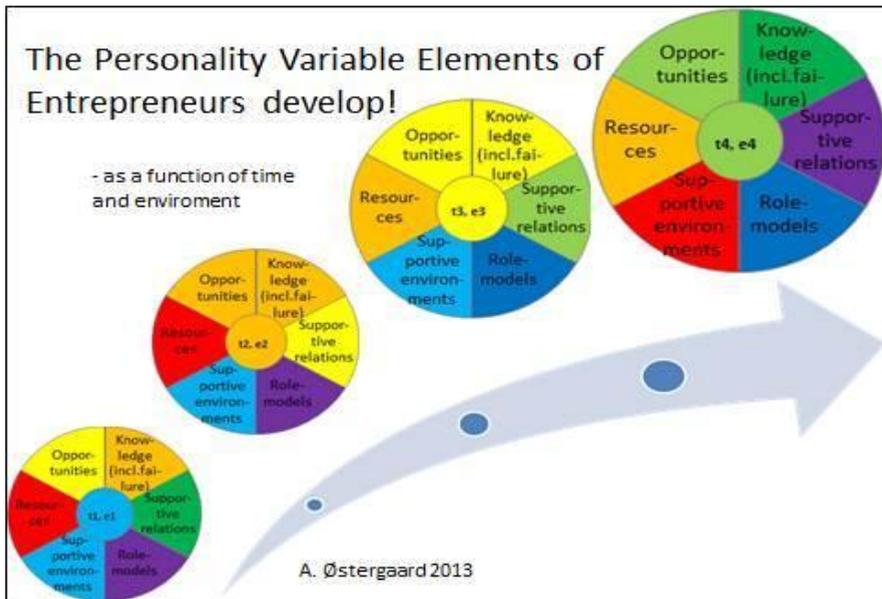


FIGURE 25 THE PSYCHOLOGICAL PERSONALITY VARIABLE WHEEL DEVELOPMENT

In the middle of the circle, the psychological invariable also takes colour from the majority of the psychological variables to indicate that the amount or the weight impacts as for instance after years of depression or post-traumatic stress disorder

²⁰ Red: Strain; Orange: Stress; Yellow: Tense; Blue: Straight; Green: Good; Dark Green: Great; Purple: Harmony

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(PTSD). However, psychological invariables do not change overnight, but they do adjust millimetre by millimetre over years. Hence, the likelihood of interchange between psychological variables and invariables has to be considered in longitudinal studies.

In Figure 25, the process is shown as an example created from the comments of entrepreneurs:

At time 1 in environment 1, the entrepreneur is challenged by a newborn in the family. The entrepreneur copes with the challenge due to their own upbringing in an entrepreneurial family. According to their arrangement, the partner runs the business, while the entrepreneur handles the new situation. In general, innovation is on standby due to absence of resources.

In the next circle at time 2 in environment 2, the entrepreneur still struggles with the addition to the family, because the child does not sleep at night. Fortunately, the entrepreneurial family supports the children, and the partner continues the double work in the business. Resources are still in short supply, and a funding deadline is looming in regard to crucial financing.

In the third circle at time 3 in environment 3, the entrepreneur succeeds with parenthood and the child thrives. The entrepreneur imitates the family pattern and it works well. The partner still runs the business, and the entrepreneur has started working half-time, but the deadline still approaches.

In the last example at time 4 and therefore in environment 4, the entrepreneur has found a work-life balance, and the spouse has entered the enterprise as an active teammate, making the imitation of the entrepreneur's own childhood complete. However, the partner has had enough and left, meaning that the entrepreneur had to do double work. The entrepreneur succeeds in finding an interested business angel, who joins the board.

Thus, the individual entrepreneurial profile is linked to the current time, for example age or historical stage of development, and level of invention, plus the current environment with supportive family, financial backing and optimal professional relationships. In simpler terms, the current entrepreneurial profile is a function of time and environment. Likewise, the talent development changes over time and is dependent on the whims of the environment.

However, the environment appears immeasurable due to the number of influential factors interacting. Moreover, the cultural framing impacts intensely and differently on the establishment of an enterprise in Sahara or in Silicon Valley, regardless of the similarities of products and supportive relations (Hofstede & McCrae, 2004).

Clearly, attention is needed towards psychological variables and how they differ from psychological invariables. The psychological variables are important, such as social relations and support from spouses (Bowen & Hisrich, 1986; Hisrich, 1986; Hisrich & Brush, 1987).

8.5 ESSENTIAL FACTORS OF THE ENTREPRENEURIAL PERSONALITY

Entrepreneurial development as demonstrated in the previous section consist of an early screening for “talent” or interest related to the innate seed; conscious awareness of nudging during childhood and youth; providing of role models and teachers to expand knowledge and experience; and deliberate practice of the potential future main activity. Consequently, by addressing the process and the diversity of the external impact of learning initiatives and policy considerations, societal and individual entrepreneurial prosperity can be encouraged.

The key factors related to promoting more entrepreneurs from a psychological perspective is among others to establish a general societal attitude for entrepreneurs as seen in US and opposite that of current and previous totalitarian regimes. On a local level, establishing supportive environments such as incubation parks promotes more entrepreneurs due to the access of adequate relationships. When it comes to improving the entrepreneurial activity from a psychological perspective, the essential key factors of the entrepreneurial personality need upgraded exploration in ambition of relate profitable knowledge to each individual entrepreneur.

Consequently, the essential constitution of the entrepreneurial personality is further pursued in the three sub-questions through the theoretical and empirical reflections. Hence, the psychological core as the nature of an entrepreneur interacting with environmental influences is investigated in relation to the substance of entrepreneurial leadership in the following subsections to shed light on the different genetic possibilities and limitations that are actualised as a consequence of specific life events in the given physical, social and cultural environment in relation to development of the particular personality (Kluckhohn et al., 1953).

8.5.1 PERSONALITY THROUGH A PSYCHOLOGICAL LENS

In regard to personality, the research indicates that the entrepreneur possesses an innate entrepreneurial sprout which is fully exposed around adolescence and develops into entrepreneurial talent in accordance with the individual lifelong development and environmental influences. The personality consists of both stable invariable traits and impressionable psychological variables which particular come into play concerning learning programs and the like. Different, the personality traits are stable in recognition through generations and in prediction of future actions, such as ideal vocational choices, besides being displayed in thought, perception and behaviour.

The analysis of the entrepreneurial cohort of 55 active Danish entrepreneurs argues for a future distinction between three categories: Imaginary-entrepreneur, Self-employed and (standard) Entrepreneur. Naturally, the personality traits belonging to each category need further validation through analysis of multiple cohorts, but the categories are clear.

The Imaginary-entrepreneur is described through the typologies the Bag Carrier and the Opportunist characterised by a majority of negatively-related leadership and innovation personality traits.

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The Imaginary-entrepreneur is useful in the prediction of who is not an entrepreneur. Hence, this category is omitted in the sample of entrepreneurial categories. Instead, a new category emerged: Business owner.

The Business owner category is derived from the analysis of leadership role preferences, where it became obvious that some entrepreneurs possessed less or no innovation but significant amount of leadership skills and business drive. However, this category also needs further investigation using a broader cohort.

Consequently, the traditional entrepreneur is suggested to be divided into three categories that are defined to be The self-employed, The Business Owner, and The Entrepreneur as outlined below.

DEFINITION 13 OF THE THREE CATEGORIES WITHIN ENTREPRENEURSHIP

The Self-employed entrepreneurs are described through the factor typologies the Administrator and the Routinized Employee. In general, these individuals manage to at least earn their own salary, offer services or basic products for the population, pay taxes, and usually give rise to the financial foundation for several equivalent self-employed individuals, freelancers or sub-suppliers. Due to the factor analysis, the main difference between an entrepreneur and a self-employed individual concerns the innate need for creativity and innovativeness. In conclusion, an entrepreneur creates and innovates continuously, where a self-employed person prefers routines and parallel occupations to obtain work-life balance.

The Business owner as a category needs further investigation concerning personality traits due to the current factor analysis being done with a primarily entrepreneurial-identified cohort. More traditional research on CEOs might depict a business owner more than an entrepreneur. However, the personality of an entrepreneurial leader is a valuable source for interpretation. Likewise, the Administrator offers inspiration to learn from.

The Entrepreneur as a category are further subcategorised with typologies based on the factor analysis. The entrepreneurial typologies distinguish between well-functioning entrepreneurs, imperfect entrepreneurs and desperate entrepreneurs. The distinction matters at a political level in relation to how the society best support the specific entrepreneur. The well-functioning entrepreneurs are described by the factor types the Synnovation Creator and the Team Organizer. The imperfect entrepreneurs are described through the Rebel and the Adventurer. The last entrepreneurial type, the Desperate Survivor, depend on constructive support which over time leads the entrepreneur towards the imperfect or well-functional entrepreneurial types.

In conclusion, an individual with consistent innate characteristics in a positive deviation from the norm as being entrepreneur belongs by default in one of four main standard entrepreneurial typologies:

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The Synnovation Creator (Factor One),

The Team Organizer (Factor Four),

The Rebel (Factor Seven), and

The Adventurer (Factor Eight)

In addition, entrepreneurs seldom completely match the Desperate Survivor typology, but the more they do, the worse the situation.

The diversity outlined through the factor analysis enables scholars, politicians and practitioners to relate entrepreneurial findings to the nine typologies of entrepreneurs. Two typologies are in connection with an immediate recognition of the non-entrepreneurial mindset; one typology for spotting desperate survivors; two typologies in order to activate entrepreneurial learning, networking, teams, growth programs and finding potential inhabitants for incubation parks; and two typologies with the expected most prosperous outcomes who presumably manage on their own and prefer to continue this way.

Hence, the personality pattern enables the individual to either be incapable of becoming an entrepreneur, preferring to be self-employed, a business owner, or an entrepreneur, according to the factor analysis.

8.5.2 ENVIRONMENTAL INFLUENCES ON THE ENTREPRENEURIAL PERSONALITY

In general, the entrepreneurs start by simply following their innate personality if possible due to the actual circumstances. Thereby, they become, for instance, intrapreneurs, entrepreneurial managers, entrepreneurial employees or full-fledged entrepreneurs. According to their life experiences and opportunities, they move towards fulfilling their potential in predictable patterns in order to exploit the innate personality traits and in combination with the imprinted and achieved knowledge.

During a life span, any human being is influenced by the current environment, the context and the impact from the respective relationships. However, age affects the influence on the individual: From 1 to 3 years, the child moves outside the secure base (Bowlby, 1960; 1976; 1982; 2012) and experiments with autonomy; from 3 to 6 years initiative is rehearsed by taking steps into the proximal zone of development (Brown et al., 1999; Vygotsky, 2014), industry and endurance are practiced deliberately from 6 to 12 years (Ericsson, 2003b; 2008; Newell et al., 1959; Simon, 1975; 1978), and finally, the identity is formed from 12 to 19 years by role models (Lorenz, 2002; 1950), also the entrepreneurial identity. Thus, nurture, especially in early childhood, impacts the individual's functional condition and whether the individual is more or less resilient, vulnerable, altruistic, egocentric, rebellious and submissive (see Table 6 for more information).

The external impact is inevitable and contributes naturally to the discussion of entrepreneurs being born or made, which indeed is about being born *and* made. The innate aspect is described in the previous section. The learned part of being an

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entrepreneur relates to the environment and the accompanying determinant circumstances.

Entitled to this investigation, the factors of environmental impact on entrepreneurs and thereby the entrepreneurial personality are narrowed down to the upbringing and imprinting, the parent and grandparent as role models, life-changing events, indispensable deliberate practice, and the accurate support with regard to time, place and content as explained meticulously below.

DEFINITION 14 OF THE MAIN ENVIRONMENTAL INFLUENCES OF ENTREPRENEURS

The Upbringing and Imprinting determine future entrepreneurial activity: The leverage in terms of tacit knowledge and intangible affinity from imprinting and upbringing generally decide the focus of the entrepreneurial business.

Parents and grandparents are the paramount role models: The main role models for entrepreneurs, and presumably all others, are the parents and the grandparents due to the intimacy and trust involved.

Life-changing events affect the magnitude and direction of entrepreneurial efforts: The entrepreneurial talent of coping, exploiting, and changing misfortune into beneficial challenges, called serendipity, is legendary in relation to entrepreneurs and in handling life-events constructively.

Deliberate practice is an advantage: Entrepreneurial expertise emerges from more than 10,000 hours of conscious or unconscious practice attached to a personal talent or relational habits either involuntarily or by choice. Long-range activities done for around 30,000 hours, which are implemented in the entrepreneurial business, are assumedly a considerable part of the entrepreneurial advantage and success. Consciousness in marshalling the time is additional profitable.

Support is inevitable: The immediate essence of the entrepreneurial endorsement, coaching, teaching, and acceptance is that it is given appropriately in regards to giver, time, place and content. The only one with the ability to judge whether this timing suits is the entrepreneur him or herself, which is why it is vital to consult the entrepreneur regarding needs for support.

Hence, the main focus in terms of professional supportive impact addresses specifically the entrepreneurs in the middle of a normal distribution curve of entrepreneurs, not the imaginary-entrepreneurs or the superior entrepreneurs. However, the individual personal support must be in accordance with for instance the actual age of the receiver and the learning environment in kindergartens, schools, extracurricular activities and later society, industry and culture. In conclusion, the entrepreneurial cluster in the middle of the entrepreneurial population benefits most from support, role models, learning programs, and practice.

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In line, Werner and Smith (1992) conducted a longitudinal study on life-changing events and found that the most resilient individuals were described by their caregivers as “very active” already as infants. Specifically, the girls were described as “affectionate” and “cuddly”, where the boys were described as “good-natured” and “easy to deal with”. They also found a direct link between Early Stressors and Adult Coping Problems (1992, p. 56). Accordingly, external and contextual incidents in the process of a life span impact at least the resilience of the individual.

Generally, coping theories support the entrepreneur’s ability to solve problems, given that Meninger, according to Monat and Lazarus (1991), identified human regulation mechanisms to reduce the tension in stressful situations, comprising the ability to think through and finish the work. Maddi and Kobasa describe a resilient personality type as open for change focusing on the multiplicity of possibilities and as possessing control, engagement and preparedness for challenges (In Monat & Lazarus, 1991). The phenomenon is further analysed by Sarasvathy (2008) by having entrepreneurs think aloud while they solve problems. Often, merely the attitude and method for problem-solving place the entrepreneur a step ahead of others.

In the discussion regarding the issue of whether entrepreneurs are born or made, the arguments for “making entrepreneurs” by the environment differ from the “born to be an entrepreneur” arguments. Hence, entrepreneurs and personal characteristics cannot be studied independently from the features of the environment due to a research results with only one personal characteristic of an entrepreneur with no changes being Dominance (Littunen, 2000a; 2000b). Likewise, the isolating effects of the personality characteristics of nascent entrepreneurs and new business owner-managers on success are inappropriate for forming a configuration perspective. The rewarding emerges from a deeper understanding of the action patterns underlying the different entrepreneurial configurations instead of searching for the “mono-causal” effects of personality on the success of new small businesses (Korunka et al., 2003).

Similarly, Baron and Markman (2000) argue that social skills may be even more important than personality traits in predicting entrepreneurial success. More nuanced, contextual variables as well as personal characteristics contribute to the probability of success, where positive outer factors might compensate for extremely high levels of traits or interact with the personality to allow us to predict success or opposite failure with more accuracy (DeNisi, 2015). Hence, DeNisi addresses specific directions for future research by extending and elaborating upon some of Miller’s (2015b) points of traits leading people to become entrepreneurs also can lead to their failure in extremes.

The notion is that both the innate traits and the environmental impact for entrepreneurs must be present to succeed. In general, the environmental impact matters the most (Newell et al., 1958; Simon & Newell, 1971; Simon et al., 1987; Simon, 1983) followed by Ericsson in a comprehensive study²¹, where the empirical findings and

²¹ Anders Ericsson pursued the objective of developing and measuring expert, superior, professional and elite performance and deliberate practice with different scholars over decades (Ericsson & Smith, 1991; Ericsson et al., 1993; Ericsson & Charness, 1994; Ericsson & Lehmann, 1996; Ericsson, 1996; 1999; 2000; 2003a; 2003b; 2003c; 2003d; 2006a; 2006b;

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the theoretical discussion emphasise the subjects with the apparently highest impact on entrepreneurs.

Compatible, the objective of entrepreneurial talent development is crucial in a societal context with the basic from deeply grounded interest of innate inheritance practiced and refined to last (Ericsson et al., 1993). Also, talent changes over time according to the performing practice: 10,000 hours' practice in a specific activity produces experts, and practice for 30,000 hours produces elitists with the skills to transfer learning from one area to another (McGrath, MacMillan, & Scheinberg, 1992).

The analysis of research results outlines the key factors in successful entrepreneurial talent development.

DEFINITION 15 OF THE KEY FACTORS IN TALENT DEVELOPMENT

First, the time used with passion on the topic in an active and authentic environment using nature of practice instead of repetition.

Second, the talent should be spotted at a very early age in hopes of developing the talent to its full potential.

And third, in order to understand, interpret and assist with talent development, a separate focus is beneficial of the psychological variable and the psychological invariable personality elements.

Hence, talent development is put into perspective with a new focus on the entrepreneur's background and the ongoing environmental impact according to skills including education, age, possible learning environments, society, industry and culture. For example, tacit knowledge on fish, trade and coping with crisis from a family of fishermen on the Atlantic Ocean coastline combined with an education in marketing and a study exchange program in China could presumably lead this imaginary entrepreneur to launch a new restaurant concept with sushi and seaweed in Great Britain, Scandinavia, Germany, France and Spain, starting in the homeland.

For this reason, traditional package solutions with bookkeeping lessons, business plan courses and the like suit the self-employed, but in relation to entrepreneurs' individual assistance is required, often instantly. Those who usually cope well and manage challenges of, for example, life-changing events, are outstanding types who profits from individually designed assistance at the right time and place, when they momentarily are strained or want accelerated progress.

The environment impacts the entrepreneur's innate base, affecting content, size, ease, pace, and duration of the entrepreneurial business.

Ericsson & Ward, 2007; Ericsson, 2007; Ericsson et al., 2009; Ericsson, Nandagopal, & Roring, 2009a; Ericsson, 2009a; 2009b; Ericsson et al., 2009b; Williams & Ericsson, 2008)

8.5.3 LEADERSHIP AS A CONSISTENT COMPONENT

The two previous sections demonstrate that entrepreneurs have a specific talent for solving problems. Thus, their innate potential for innovation and leadership relate to the functional categories of Change Management and Efficiency Management, Growth, Power and Vitality, and the personality traits Achievement Instinct, Creative Drive, Preparedness for Change, Dynamism, and Initiative.

Opposite, Erwin Kauffman's recipe for successful leaders to work hard and have fun (In Smilor & Sexton, 1996) is supported as learning new skills often erupt into pleasure and laughter (Siebert, 1996). In addition to the recipe, the entrepreneurial leaders constantly work; however, they learn to work smarter instead of harder by clustering their experience into chunks (Simon et al., 1987) and imagining a series of consequences instead of trying them all in real time (Østergaard, 2003).

Gupta et al. (2004) recognise entrepreneurial leadership according to past research as leadership that creates visionary scenarios that are used to assemble and mobilize a 'supporting cast' of participants who become committed by the vision of discovering and exploiting strategic value creation in line with the basis of Johnsen's (2002) leadership pillars consists of goal-setting, communication and problem-solving.

However, Casson (2010) makes a point regarding accumulated knowledge and how that impacts the entrepreneur's ability to solve problems. There is no doubt that relevant broad experience enhances the quality of problem-solving and the possibility of transferring solutions from one area to another. Since application of knowledge requires learning in diverse contexts, Casson's argument of time-consuming learning is partly supported.

The survey results make clear the broad spectre of leadership experiences of entrepreneurs: "Previously up to 60 persons", "I have been self-employed without employees for 15 years", "To manage without a title is more demanding than one could think, which is why it needs to be taken into consideration", "I run a one-man business", "self-employed from 2012 together with experiences from organisations and boards", and "2 permanently employed and 8 freelancers".

Hence, the entrepreneur selects a leadership pattern due to desires or pragmatic solutions: "The entrepreneur may follow what is sometimes described as an 'identification with the aggressor' pattern" (Kets De Vries, 1977, p. 50).

Throughout the empirical analysis, the entrepreneur appears to hold to a preferred entrepreneurial leadership behaviour, including problem-solving, regardless of age, former experiences and current activity. The findings emphasise the three developmental leadership roles of Johnsen (2002) as tightly connected to the entrepreneurial leader (outlined below).

The leader role number 25, The Entrepreneur describes a leader continuously launching new ideas with thoughts about when and how these initiatives can be realised. The leader role is characterised by a risky life with passion for different solutions to help fulfil one or more of the visions.

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The leader role number 26, The Strategist is a leader role which concentrates on a dynamic balance of stakeholders through changes in composition and quality, and with the goal to obtain an ongoing refinement of the business or organisation's societal function.

The leader role number 27, The Statesman is characterised by leaders who position themselves with power, creditability and efficiency and constantly strive for the leadership process to function and develop throughout the system, both internally and between the system and the environment.

In regard to reveal knowledge from the intersection between the entrepreneur and the leader, the thesis points out an academic interest and focus at firm level, strategic national level, conceptual historic progress, and in theory development. In fact, only one article in a high-ranked journal mentions the intersection of leadership and entrepreneurship in the headline and deals with the topic based on theory, philosophy and a three-stage life cycle (Cogliser & Brigham, 2004). There were 16 papers with the term "Entrepreneurial Leadership" in the abstract.

Since the year 2000, the concept of entrepreneurial leadership has become more prevalent in academia. The first article appears in 1985 from McKinsey et al. in the database Business Source Complete, however it is not a Grade 3 or 4 journal. In comparison, the first article about entrepreneurial personality is a literary classic from Kets De Vries (1977).

Hence, the concept of the entrepreneurial leader is seen as recent regardless of the early interest from the University of Illinois (e.g., Birch, 1987; Burns & Stalker, 1961; Mintzberg, 1979; Pinchot III, 1985; Sexton & Smilor, 1986). Even though the leading scholars of both entrepreneurship and leadership are represented, the research of the intersection is rather narrow and challenged by a changed focus away from the individual's personality beginning with Stogdill (1974) related to leadership and Gartner (1988) in relation to entrepreneurship.

Additionally, the measurement of the entrepreneurial personality has often been characterised as a 'homebrew' of mismatched ingredients (Davidsson, 2005; 2008). For instance, the early personality measurement was done on soldiers and managers (Chandler & Lyon, 2001) and often focused on psychiatric development (Bennet, 1951), which is far from an entrepreneur dealing with professional trials.

In recent times, Gupta, MacMillan and Surie (2004) clarified the new concept with a theoretical framework. They developed an empirical measurement of attributes, and stated that the leader must be able to extract exceptional commitment and effort from organisational stakeholders, convince their employees that they can accomplish goals, articulate a compelling organisational vision, promise their effort will lead to extraordinary outcomes, and persevere in the face of environmental change (Gupta et al., 2004).

Accordingly, with the modification that the individual contextual circumstances have the most impact in relation to the communication style, timing and recipients, Gupta

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et al.'s five points for leaders managing growth and change (entrepreneurial leaders) are supported (2004). Hence, an entrepreneurial leader must be able to connect to a necessary degree with appropriate supporters; inspire and excite employees, partners and freelancers towards a common goal; articulate continuously at the cutting edge of the organisation's or business's development; motivate at an individual level and celebrate each success; and persevere during all sorts of challenges. In continuation, the extraction of commitment of stakeholders (Johnsen, 2002) is only partially met since the stakeholder commitment is reserved in case it is needed to achieve the goal, and the empirical findings indicate that entrepreneurs only dedicate energy to their own high-priority projects.

The notion is that the concept of Entrepreneurial Leadership deepens our knowledge and consolidates the focus on core aspects of the individual entrepreneurial leader. It may be argued that the very definition of an entrepreneur has substantial overlap with that of a leader (Cogliser & Brigham, 2004).

Consequently, a focus on the concept of "entrepreneurial leadership" is a sustainable direction. In general, the respondents with a high affiliation towards the Factor One type of entrepreneur, the Synnovation Creator, correspond with the three developmental leadership roles, most significantly with the Entrepreneur, then the Strategist and lastly the Statesman. Along with a strategic approach, the number and types of employees correspond to the preferred communication style, where the entrepreneurial leader communication includes convincing, articulating and promising modulated in style, amount and frequency to achieve a planned goal.

The theoretical intersection between entrepreneurs and leadership reveals three areas related to the entrepreneurial personality:

First, insightful characteristics due to the dilemma of being an employee besides being an entrepreneurial leader and from more recent concept of the entrepreneurial leader; second, the descriptions of the leadership roles preferred by entrepreneurs; and third, an academic gap found on the individual level, strongest in relation to key words in high-ranking journals.

In regard to entrepreneurial leadership behaviour, the applied leadership theory is empirically supported through the entrepreneurial cohort, and the analysis further outlines leadership as a decisive element of entrepreneurial behaviour:

The empirical results of entrepreneurial leadership clarify that entrepreneurs emphasise three specific developmental leadership roles: the Entrepreneur, the Strategist, and the Statesman. In general, the entrepreneur has a distinct preference for utilising a leadership behaviour characterised by developmental goal-setting and experimental problem-solving behaviour.

Through the empirical analysis, the value of the scores sketch detailed patterns that allow further theorising from the individual level. Accordingly, a categorisation was further developed due to different strengths of leadership behaviour of entrepreneurial individuals, first related to demographic data and afterwards correlations anonymised

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to personality traits for ethical reasons. Hence, a highly significant correlation between the preferred leadership roles and the personality traits of the entrepreneurial cohort was recognised.

According to three different analyses using Pearson's correlation, Spearman's rho and Kendall's tau-b, the analysis shows a highly significant correlation between the three developmental leadership roles the Entrepreneur, the Strategist, and the Statesman and specific personality traits. Accordingly, the most significant result was a negative correlation, Structuring Capacity; followed by positive correlations between the three developmental leadership roles and the following traits: Achievement Instinct, Creative Drive, Preparedness for Change, Dynamism, Initiative, and ends with another negative correlation: Adaptation Capacity.

As a result of all three measurement methods in relation to the three leadership roles of developmental goal-setting and experimental problem-solving behaviour, the ranking offers vital information for understanding entrepreneurs in general and specifically in generating learning objectives.

Hence, a general depiction of entrepreneurs is produced using the seven significant personality traits, of which two are negatively correlated, along with the theoretical personality traits: Autonomy, Exploration Drive, Preparedness for Change, and Self-preservation Instinct. It is not surprising that entrepreneurs lack structure and are highly motivated to explore, create, and achieve in a fast and changeable environment on their own terms.

The concept of an entrepreneurial leader also characterises a well-functioning entrepreneur. Likewise, change management would benefit by having an entrepreneurial leader in charge who is characterised by working alone and searching with a dynamic curiosity for unidentified better solutions. If necessary, the entrepreneurial leader change environment to a more suitable social context.

As a theoretical contribution based on significant empirical investigation, a current definition of the entrepreneurial leader is proposed:

DEFINITION 16 OF THE ENTREPRENEURIAL LEADER

The entrepreneurial leader is a proactive individual who continuously launches and realises ideas. By positioning oneself with power, creditability and efficiency, the entrepreneurial leader demonstrates an ability to keep a dynamic balance of stakeholders and to execute the leadership process by developmental goal-setting, adequate communication and experimental problem-solving.

Finally, the impression is that leadership intertwines with the entrepreneurial personality. Regardless of the limitations, the respondents reveal robust results from a standardised personality test and a theoretical documented leadership preference test. In agreement with Baron, Frese and Baum (2007), research benefits from a closer

link towards industrial and organisational psychology in relation to business creation and success. This is why the argument is strengthening for correcting the categories of entrepreneurs due to diverse personalities, changing the term for entrepreneurs without employees and innovation to Self-employed, and for entrepreneurs with leadership but without innovation to be termed Business owners.

To close, an entrepreneur possesses a unique innate pattern of thoughts, perception and behaviour demonstrated in their goal-setting, communication and problem-solving, which is continuously refined in interaction with others according to the current context. In order to succeed, the entrepreneur must naturally manage and cope with challenges in ways that are different and smarter than others do.

Consequently, leadership is a regular component and leader qualifications are part of an entrepreneur's compiled resources.

8.6 THE ENTREPRENEURIAL PERSONALITY SCOPE, UPDATED

The above mentioned contributions lead to a renewed theory developed primarily from the personality definition and the psychological variable wheel supplemented with the Giessen-Amsterdam model and McAdams & Pals' five personality principles. In addition, the empirical knowledge from measuring the full personality and the factor analysis results of nine entrepreneurial types is taken into account. The important factor elements of Frese and Gielnik are further developed and integrated with McAdams and Pals's five personality principles (2006) into three different areas:

First, the individual's innate and stable personality, consisting of human nature; all traits both positively and negatively related in the inner circle; and in the outer circle behaviour, thoughts and perception interacting.

Second, the individual's physical conditions, consisting of: individual preconditions such as educational and vocational background; mental abilities; and current stage in a life cycle.

Third, the individual's contemporary and variable social and societal status of: deliberate practice; expertise; social networking; characteristic adaptations; integrative life narratives; culture; entrepreneurial orientation; goals; general, specific and tacit knowledge; possibility of searching for information, niche and opportunities; seeking resources; social and environmental preconditions including feedback, industry, models in family or environment, and predictability.

The developed three areas are incorporated in Figure 26, where the individual person, in this case an entrepreneur, is born with personality preconditions based in the stable, recognizable and predictable traits. On a long-term basis, the functional condition effects the traits and at the same time the innate preparedness of handling challenges powers how the functional conditions perform in daily life. In general, the social context is of tremendous consequence in an individual's development and demands particular attention.

The Entrepreneurial Personality Scope

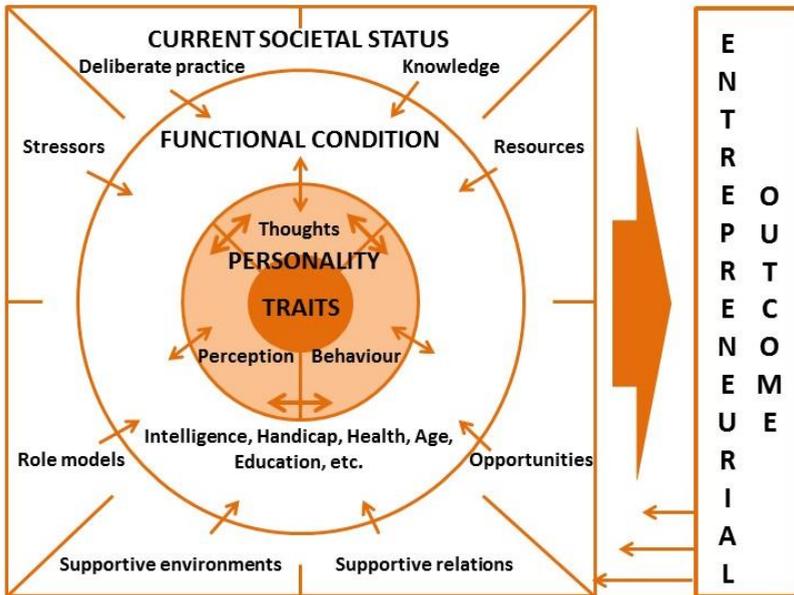


FIGURE 26 THE ENTREPRENEURIAL PERSONALITY SCOPE

The actual sum of the synergy, integration and utility of the three areas are decisive in regard to the outcome which appears in many shapes and circumstances. All kinds of outcomes reflect to the context, which again affects the function of the individual in a continuous process of entrepreneurship during a life-span.

Hence, Frese and Gielnik's description of the entrepreneurial process in the three phases towards entrepreneurial success is supported, and their model advanced. Moreover, McAdams and Pals' historical mission of providing an integrative framework for comprehending, assessing and studying the whole person is further developed for the discipline of psychology and for social and behavioural sciences. The development, based on the five principles, supports Allport's (1937) and Murray's (1938) belief that personality psychology best serves the discipline by suggesting integration of findings from a wide spectrum of subfields with respect for the relevance of the individual person (McAdams & Pals, 2006, p. 214).

The innate and invariable part of the psychological variable wheel consisting of personality traits is placed in the middle as the core of the entrepreneurial personality scope. This part becomes visible through thought, perception and behaviour. Ideally, this part consists of all traits in regard to the empirical results from the full personality measurement with both the entrepreneurial peaks and the entrepreneurial weaknesses,

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or “the dark side” of entrepreneurs. In a realistic view, then at least the traits derived theoretically and empirically and analysed as significant in this research, outlined in Table 56, would be a minimum of personality traits belonging to the core of an entrepreneur in the entrepreneurial personality scope. For each of the four significant entrepreneurial types, the dominating traits derived from the factor analysis is a proper addition.

| The essential personality traits according to the survey |
|--|
| Four significant traits derived from “the theoretical entrepreneur” |
| Autonomy, Exploration Drive, Preparedness for Change, and Self-preservation Instinct |
| The six dominating traits from the four most distinctive entrepreneurial types |
| Will of Delegating, Risk Willingness, Dominance, Passion, Self-confidence, and Creative Drive |
| The five positive traits from the correlation with three prominent leader roles |
| Achievement Instinct, Creative Drive, Preparedness for Change, Dynamism, and Initiative |
| The psychological core of personality traits of an entrepreneur (assembled) |
| Achievement Instinct, Autonomy, Creative Drive, Dominance, Dynamism, Exploration Drive, Initiative, Passion, Preparedness for Change, Risk Willingness, Self-confidence, Self-preservation Instinct, and Will of Delegating, |

TABLE 56 THE ESSENTIAL PERSONALITY TRAITS OF AN ENTREPRENEUR, THE ØSTERGAARD SURVEY 2012

In relation to the psychological variable wheel, an extra circle is added with the functional conditions since these often are the motivational factors towards the entrepreneurial activity and likewise a fundamental obstacle to muddle through. An example could be an entrepreneur with dyslexia developing a read-aloud software program. Injuries and assaults can have an impact as well as handicaps and

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intelligence. According to Siebert (1996) a barrier can be transformed into advantages, which characterises the best-functioning individuals, such as successful entrepreneurs. In addition, the variable elements are expanded to include the knowledge from the above-mentioned models like stressors and deliberate practice.

In sum, throughout life the individual entrepreneur orientates towards imaginary “lighthouses” by an inner compass, also explained as the Teleological Compass (Østergaard, 2003). Hence, the entrepreneur launches projects passionately with an inner compass towards a goal, not only due to ad hoc opportunities. To the contrary, the opportunities are used in relation to how they fit into the invisible pattern. While travelling, the entrepreneurs use their senses, feelings, and reactions of others as inspiration to position themselves and to confirm the course. Thereby, the entrepreneur accepts periods of necessary wage labour, and they manage such irrelevant periods or tasks on autopilot without further concern due keeping “the real goal” in sight. This phenomenon also explains why the entrepreneur continuously strives for the next target and why hope is of such importance (Werner & Smith, 1992).

8.7 TOWARDS A CONTEMPORARY ENTREPRENEURIAL PERSONALITY

Theoretically, entrepreneurship has been defined from various perspectives: pursuit of self-interest (Smith, 1776), innovative combinations of available resources (Schumpeter, 1934), uncertainty and risk-bearing activities (Kets De Vries, 1977), risk-avoiding or risk-minimizing behaviour (Leibenstein, 1968; Smith & Miner, 1983) and proactive or opportunity-seeking behaviour (Miller, 1983; Stevenson, 1983).

However, entrepreneurship is also viewed as a discrete event based on the autonomous pursuit of innovative opportunities (Lumpkin & Dess, 1996) supporting a more integrative perspective of the entrepreneurial thinking within existing organisations (Kanter, 1982). Thus, the entrepreneurial mindset is a core element of strategic management, particularly in high-velocity environments of competition and change (McGrath & MacMillan, 2000).

In contrast to Peterson and Berger’s (1971) argument of an entrepreneurship strategy forced by environmental turbulence, the empirical results point towards an innate and a learned factor affecting the entrepreneurial performance and also the entrepreneurial leadership performance.

8.7.1 THE ADDITIONAL FINDINGS IN SUMMARY

All in all, the genuine entrepreneurial personality in a contemporary agreement includes vast of addressed subjects. Hence, the contributions are presented throughout the chapters to clarify the concepts through theory development and base the results on robust empirical data. Besides other minor contributions, the following objectives were developed and introduced:

The definition of The Concept of Personality, where behaviour, thoughts and perception bring the personality to light

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The definition of the Theoretical Core Personality Set of Entrepreneurs

A refined Entrepreneurial Action Characteristics Model

A model of The Psychological Personality Attributes considering the psychological invariables and the psychological variables

A Model of the Precondition before Measurement

A psychological interpretation of nine entrepreneurial factor types based on personality traits

A current definition of The Entrepreneur

The entrepreneur's Life-Changing Events displayed

A categorisation of entrepreneurship with three categories defining separately, the Self-employed individual, the Business owner and the Entrepreneur with type identification of two well-functioning types and two potential types

The types the Desperate Entrepreneur besides the Imaginary Entrepreneur is displayed to identify the least prosper entrepreneurs

The Main Environmental Influences of Entrepreneurs is defined

A definition of the Key Factors in Talent Development

A definition of The Entrepreneurial Leader as a concept

A model of The Entrepreneurial Personality Scope

A definition of The Entrepreneurial Personality

Finally, a model of The STAR-Entrepreneurial Types is displayed

Furthermore, psychological figures are introduced in amended versions:

JoHari Window with the unconscious part (Luft & Ingham, 1955)

Eriksons epigenetic diagram (Erikson, 1968b; 1980)

As a reaction to Hisrich, Langan-Fox and Grant's (2007) "call to action" for psychology, the gaps in the entrepreneur literature are filled in by developing theory and undertaking empirical research in identifying the factors that influence new venture creation and success. According to the five key topics, the personality characteristics of entrepreneurs are heavily emphasised, the dark side of entrepreneurs is outlined with robust empirical data, the entrepreneurial cognitions are indirectly referred to, for instance by entrepreneurial problem-solving, and entrepreneurial

education is mentioned as an element to shape the business, but the research field of international entrepreneurs as the only topic still lacks cross-cultural data.

8.7.2 CONCLUSIVE TEST AND MEASUREMENT CONSIDERATIONS

Almost certainly, the expectation is that the investigations of the sub-questions and their intertwined relationship in the research question will foster detailed insights and reveal current theoretical contributions. However, the research fostered additional contributions due to measurement concerns.

First, the point of a Western-dominated development of the concept of personality. The classic psychological interpretation is shaped primarily according to Hippocrates, Sigmund Freud and Carl Jung. They all approached their patients through the acquired knowledge of personality with the objective to rebalance and restore towards a fulfilment of the individual's skills, potentials and wishes. Consequently, the measurement by which the personality is measured in this research follow the psychological tradition.

Second, the development of measurements of personality, entrepreneurship and leadership is still in its infancy. Thus, Hisrich et al. (2007) recommend longitudinal research to identify antecedent personality characteristics and the characteristics involved in persistence and long-term success. Moreover, factorial methods are useful in the advancement of psychology provided that the methods are used in close relation to psychological ideas (Thurstone, 1928).

Ideally, the preferable measurement instruments are standardised, valid and reliable, theoretically substantiated and measure a cohort of a representative part of the entire relevant (e.g., adult) population. Hence, an overview of the most frequently used personality tests is provided including their limitations. The learning from this overview speaks for the advantages of a full personality test measurement to avoid measuring specific behaviours, motives or traits to characterise the whole of an individual. For instance, measurement of both peaks and the lowest scores provides a sense of perspective from which to make valid and reliable interpretations as opposed to subjective invalid answers from self-report.

Conclusive, the optimal framework for assessing individuals encompasses the full picture of psychological variables and psychological invariables plus the process, which means that longitudinal studies are desirable. Additionally, future surveys are suggested to include the unconscious in measurement of personality.

Third, the literature generally lacks reflections on the preconditions of measurement which gave rise to an additional contribution. Hence, a model was developed that considers the basic question before a measurement.

If measurement of the entrepreneurial personality develops optimally, the precondition components of measurement are mandatory in the future explained by the questions: "Why measure?", "What to measure?", and "How to measure?" By questioning the what, why and how, the researcher manages to some extent to cope

with the challenges of measuring concepts and a person as in the academic field of entrepreneurial personality.

Fourth, the majority of personality tests are developed from the principle of dichotomy such as responses on the axis of two poles, for example black or white and warm or cold. These tests force respondents to react with either-or thinking. However, individuals who act as pathfinders often think differently, using both-and thinking instead of either-or thinking. The phenomenon is called paradox-elasticity (Siebert, 1996; Østergaard, 2003) and can also be explained by the Asian concepts of Yin and Yang, which are concurrently opposites and complementary to each other in relation to a whole. In order to develop an entrepreneurial personality concept, the necessity of considering the both-and types of individuals is inevitable since it suits the characteristics of a common innovative entrepreneur.

The most frequently used personality tests also rely on the principle of dichotomy: the MMPI (Minnesota Multiphasic Personality Inventory) by Starke R. Hathaway and J.C. McKinley in 1939, CPI (California Psychological Inventory) by Harrison Gough in 1956, and 16 PF (16 Personality Factors) by Raymond Cattell in 1946, all of which consist of bipolar true-false answers, where the NEO-PI-R (Revised Neuroticism-Extroversion-Openness Personality Inventory) by Paul T. Costa and Robert R. McCrae measures each of the Big Five personality traits on a graduated scale. The first version was published in 1978, followed by the revised version with 240 items, and most recently the Big Five 60-item version. However, the optimal measurement of individuals as provided in this research covers the full picture of psychological variables and invariables plus the process (Davidsson, 2005; 2008; Gartner et al., 1994; Gartner, 1988; Valencia-deLara & Araque-Hontangas, 2012).

Fifth, historically, the personality theories related to entrepreneurs began with explanations of the financial and vocational related behaviour. However, entrepreneurial behaviour involves everything the entrepreneur thinks, copes with and might achieve, not only vocational or financial choices. Hence, the entrepreneurial behaviour is crucial to fully understand the mindset (Sarasvathy, 2003; 2008). Generally, behaviour, thoughts and perception bring the personality to light rather than motives or intensions, which is well-known by children who react instantly to the behaviour rather than intensions of adults in order to avoid negative consequences such as punishment. Moreover, it is meaningful to use behaviour as a mirror of the personality according to the personality definition presented in section 3.2.1.

Several theoretical contributions with reference to models and measurements of entrepreneurial success has been considered in this research, for instance Gielnik and Frese (2013), and Rauch and Frese (2000) along with the Giessen-Amsterdam model (Frese & Gielnik, 2014, p. 428), where success is seen as a natural outcome of action (Frese, 2009) and deliberate practice as an active form of learning (Unger et al., 2009). Moreover, action is seen as active feedback-seeking for self-regulation towards managerial effectiveness was investigated by Ashford and Tsui (Ashford & Tsui, 1991; Ashford, Blatt, & Walle, 2003; Tsui & Ashford, 1994; Tsui et al., 1995). Also, active social network strategies relate to entrepreneurial success (Zhao, Frese, &

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Giardini, 2010). Obschonka and Silbereisen developed the Giessen-Amsterdam model further and added McAdams and Pals's (2006) five principles explaining the personality of an individual to be composed of three intertwined levels: dispositional traits, characteristic adaptations and integrative life narratives to describe successful entrepreneurship as a developmental outcome (e.g., Obschonka, Silbereisen, & Schmitt-Rodermund, 2011, p. 174).

However, a successful outcome of entrepreneurial activity is of a diffused character and includes revenue, number of employee, size of the car or house, which are incomparable entities. Hence, the model was instead developed in accordance with the empirical results on top.

Consequently, the challenges of measurement methods for the entrepreneurial personality are met with the lessons learned from the original use of the concept of personality with suitable descriptions of individuals obtained from well-adapted measurement tools consolidated in theory.

8.7.3 SUSTAINABLE ENTREPRENEURIAL PERSONALITIES

Generally, the two concepts of nature versus nurture with interaction of biological inherent possibilities and environmental forces (Kluckhohn et al., 1953) is the point of departure to recognise the actualised factors and the limitations in relation to clarify and develop the entrepreneurial personality.

Often, entrepreneurs are seen as champions due to their innate ability to manage change by alertness, readiness of handling, and ability to cope well with changes and destabilised surroundings. However, persevering (Gupta et al., 2004) due to limitations and restricted financing impact the entrepreneurs' health and well-being negatively.

In continuation, it appears that the balance of innate and learned ability is strengthened by the imprint. The development of social attachments in childhood is critical in the period from six months to one year, and in general up to the age of two and one-half years (Bowlby, 1951). The definite sensitive period for a new object fixation is during and shortly after puberty, but if the individual fails to find a worthy object, they may become fixated on astonishingly inferior substitutes (Lorenz, 2002, p. 258). However, the constant interaction between genetics and environment influences the outcome of personality development (Ainsworth & Bowlby, 1991, p. 8; Bowlby, 1988a).

According to Erikson's epigenetic diagram (see Table 6) an individual who lacks a successful outcome from a previous age needs to return to the previous stages to achieve the desired developmental progress (Erikson, 1968b).

Consequently, the entrepreneurial personality is characterised by an innate stable sprout of innovation and leadership that passively experiences influences from relationships and the environment throughout life. From this starting point, the individual entrepreneur actively makes choices and decisions, practices their skills by force or by choice, expands their network, completes education, and collects knowledge and experiences which all become part of the entrepreneurial personality.

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Thereby, an entrepreneur, like any other individual, needs “a good soil and a well-suited and efficient gardener” and needs to distinguish between the impacting passive forces and the self-promoted active forces. However, it is the “gardeners” who shape the growth of the entrepreneurial personality and fertilise “the soil”.

Hence, the entrepreneurial personality is a question of *both* innate traits of innovation and leadership potential *and* impact from sufficient support from relationships, environment and society with space for own decisive endeavours.

Moreover, the full personality trait profile increases valid interpretation of the entrepreneurial personality with priceless insight into peaks and the dark side. The innate personality traits that predict an entrepreneurial endeavour are positively related to four significant theoretically developed traits: Autonomy, Exploration Drive, Preparedness for Change, and Self-Preservation Instinct and six empirically developed traits: Creative Drive, Dominance, Passion, Risk Willingness, Self-confidence and Will of Delegating.

However, the best source of innate abilities is genetic measurement of family cohesion, but this knowledge is not yet available. Hence, the empirical survey reveal intertwined innate and environmental cohesions of family patterns through questions about for instance preferred role models being the cornerstone of the entrepreneur’s motives for learning. Moreover, leisure time interests often relate to family patterns and connect to the income activity in the entrepreneurial enterprise. In that respect, prioritised interests correspond to personal persistence, competition and receiving new input which is expected to vitalise the entrepreneur’s ability to succeed in business.

The psychological analyses and interpretation of the personality related to the nine factor types of entrepreneurs prompt a distribution into three categories and of four typologies in the entrepreneur category as outlined in Table 57.

| Entrepreneurial types distributed in categories | | | |
|---|--|----------------|------------------------------|
| Category | SELF-EMPLOYED | BUSINESS OWNER | ENTREPRENEUR |
| Typology | The Administrator The Routinized employee | | Well-functional |
| | | | Potential |
| | | | The Synnovation Entrepreneur |
| | | | The Adventurer |
| | | | The Team Entrepreneur |
| | | | The Rebel |

TABLE 57 THE ENTREPRENEURIAL FACTOR TYPES DISTRIBUTED IN CATEGORIES

According to the distribution in categories, it is unlikely that the most successful entrepreneurs fulfil the myth of being the ruggedly independent self-employed individual (Casson, 2010, p. 269). The empirical findings underscore that an independent self-employed individual is not a leader. Moreover, neither the self-employed nor the business owner are to be considered as entrepreneurs due to their innate personality traits and their motives and interest.

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Hence, empirical evidence is provided for the usability and necessity of differentiation between non-entrepreneurs, self-employed individuals, and entrepreneurs based on personality characteristics, and between entrepreneurs and business owners based on personality indications and leadership factors as outline in Table 58.

| Entrepreneurial Personality in relation to being self-employed, business owner and entrepreneur | | | |
|---|--|--|---|
| | SELF-EMPLOYED | BUSINESS OWNER | ENTREPRENEUR |
| Description | <p>The self-employed is characterised by autonomy in one-man-enter-prises in well-known types of businesses.</p> <p>They earn their own salary and pay a number of helpers, pay taxes and maintain subcontractors. Generally, they cause no trouble for society.</p> <p>They praise their freedom to determine pace, amount and kind of work</p> | <p>The business owner runs a business: individual, team, family or group-launched business consisting of various employees.</p> <p>They are in charge of allocating the skills of employees and ensures steady revenue to selected stake-holders.</p> <p>They operate with enough incremental development to keep the business running. Growth is not a goal in itself</p> | <p>The entrepreneur constantly launches ideas, usually several at the same time.</p> <p>They are entrepreneurial throughout life, however, the activity might change to e.g. charity finding better solutions.</p> <p>Sometimes, they slow pace due to life issues and settle as business owners or equivalent maintaining next generation of growth endeavours</p> |
| Traits | GENERAL TRAITS OF AN ENTREPRENEUR (and partial a self-employed and a business owner): Achievement Instinct, Autonomy, Creative Drive, Dominance, Dynamism, Exploration Drive, Initiative, Passion, Preparedness for Change, Risk Willingness, Self-confidence, Self-preservation Instinct, Will of Delegating | | |
| EXTRA Traits – specific related to the typology | <p>ADMINISTRATOR ENTREPR.</p> <p>Adaptation capacity Empathy Objectivity Reflectiveness Responsibility Self-control Social maturity Structuring Capacity Systematic Mindedness Target Drive Tolerance</p> <p>ROUTINIZED EMPLOYEE</p> <p>There is none positive traits above [0,3] and the positive traits below are included in the extra traits of The Administrator Entrepreneur</p> | <p>INDICATION FROM THE LEADERSHIP POTENTIAL</p> <p>Decision-making ability Target Drive</p> <p>INDICATION FROM THE POTENTIAL OF EFFECTIVENESS</p> <p>Empathy Objectivity Reflectiveness Self-control Stress Tolerance Structuring capacity Systematic Mindedness</p> | <p>SYNNOVATION ENTREPR.</p> <p>Care Experience of Well-being Need for Contact Personal Manifestation Stress Tolerance Vigour Will of Integration</p> <p>TEAM ENTREPRENEUR</p> <p>Care Democratic Attitude Empathy Objectivity Personal Manifestation Reflectiveness Responsibility Social Maturity Stress Tolerance Structuring Capacity Target Drive Will of Integration</p> |

TABLE 58 THE ENTREPRENEURIAL PERSONALITY IN RELATION TO THE CATEGORIES

The notion is that self-employed individuals are characterised by routine and parallel vocations, business owners are characterised by running a balanced business primarily serving stakeholders with sufficient incremental growth, and the entrepreneurs are characterised by endless innovation wherever possible, even though they momentarily not run their own business.

Moreover, the empirical findings from a significant factor analysis on 36 standardised personality traits state that the entrepreneurs are distributed into four main typologies: The Synnovation Creator (The Synnovation Entrepreneur), The Team Organizer (The Team Entrepreneur), The Adventurer, and The Rebel.

8.7.4 SUSTAINABLE RELATIONS OF LEADERSHIP

In regard of leadership, the empirical analyses of leadership behaviour of entrepreneurs distinguish between a start-up entrepreneur, a non-entrepreneur, a team entrepreneur and a core entrepreneur illustrated by respondent examples.

Gupta et al. (2004) state that the concept of entrepreneurial leadership involves fusing the concepts of entrepreneurship (Schumpeter, 1934); entrepreneurial orientation (Covin & Slevin, 1988; Miller, 1983); and entrepreneurial management (Stevenson, 1983) with leadership. "Thus, entrepreneurship can form a basis for competitive advantage and technological growth in all types of firms that are oriented towards leadership and excellence in the new global economy" (Gupta et al., 2004, p. 243).

Hence, a main objective of future entrepreneurial growth programs is to provide economic stabilisation for the entrepreneur and thereby ensure time to dedicate to the entrepreneurial business.

"Leaders need to be both willing and able to grow their firms. Therefore, policy should promote growth-oriented training programmes that develop entrepreneurial cognition and motivations, as well as knowledge and abilities. The programmes should disseminate best practice for opportunity identification, growth capabilities and goal setting" (Wright, Roper, Hart, & Carter, 2015, p. 9).

The empirical research supports Eggers and Smilor, when they point out that entrepreneurs must manage paradoxically and create change (In Smilor & Sexton, 1996). Hence, the empirical findings demonstrate that Entrepreneurs prefer developmental goal-setting and experimental problem-solving besides primarily a communication style characterised by an operating tone eager for the best results here and now, followed by an interpersonal tone seeking synergy among all participants

The notion is that entrepreneurs are inextricably linked with leadership due to the overlap and consistency of the personality traits involved; the correlating behaviour; and the character of tasks in relation to practical execution.

8.7.5 INTRIGUING FINDINGS

The analysis showed the entrepreneurs' specific preparedness for change with their flair for turning a negative incident into a fortune, thereby creating a constructive

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contribution for self-development, which is a stable attribute called ‘Serendipity’ (Napier & Vuong, 2013; Siebert, 1996; Østergaard, 2003). As one participant explains: “When I was young, I was a volunteer in the Philippines and my understanding of value became adjusted. Since then I have not been interested in material status symbols”.

With the serendipity ability, the time perspective is essential, since the reshaping of resistance requires reflection on accepting support or advantages. Thus, the positive and negative life-event categories are: Crisis and psychological strain, job-related topics and education, long-term impact and courses, positive changes, and successes and peaks.

The survey results outline that the entrepreneurial ability to be flexible and prepared for change has to be exerted in almost half of the most significantly impactful life-events, and a fourth of these events are connected to negative experiences. Besides the impact from incidents, the entrepreneur also deals with new initiatives. Accordingly, the entrepreneurial life is not easy; it is a life with huge challenges and psychological changes.

In addition, it turns out that the matter of success and failure is a minor issue compared to, for instance, having a child due to the entrepreneur’s tendency of seeing successes and failures as natural steps forward. In fact, the entrepreneur shows an ability to turn negative events into positive steps of personal development, not because the circumstances are objectively characterised as an opportunity, rather more caused by their mindset of continuously seeking solutions and useful outcomes. Hence, the entrepreneurs use all the imprints and earned knowledge as an enhanced coping strategy for daily life and entrepreneurial enterprise challenges (Siebert, 1983; 1996; Østergaard, 2003).

The empirical survey demonstrates that the triggering factor for launching the entrepreneurial venture falls into one of three main areas: passion; the natural next step of personal development; and entering into being self-employed due to current workplace situations.

Hence, the personality trait Passion is a main driver, which on the other hand also disrupt families, if the passion is met by ignorance and disgust, because besides a passionate performance, the entrepreneur is further characterised by a strong belief in one’s own ability, even during hard times.

Project launches through passion and opportunity are navigated by an inner compass, the Teleological Compass (Østergaard, 2003), towards a goal. En route, the entrepreneurs use their senses, feelings, reactions of others and inspiration to orient and confirm the course. In cases of crisis and life-changing events, the entrepreneurs change the disadvantages into advantages using their talent for Serendipity.

In closing, the research results point out that disadvantages and misfortunes of personality traits, intelligence, beauty, talents and skills can be transformed into advantages and fortunes by conscious use of the entrepreneurial recipe. Moreover, the

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rate of becoming and succeeding as an entrepreneur is affected by time marshalling, the pattern of cultural, tacit, and achieved knowledge, and the quantity and the quality of support.

CHAPTER 9. CONCLUSION AND PERSPECTIVE

“There Are Two Ways to Be Fooled. One Is to Believe What Is Not True; the Other Is to Refuse to Believe What Is True.”

Søren A. Kierkegaard

The theoretical framing of entrepreneurs is renewed twofold with a contemporary model of the entrepreneurial personality scope on one hand and founded on personality traits differentiates between self-employed individuals, entrepreneurs and business owners as three separate categories. However, the entrepreneurial personality of teenagers, retirees and full-blooded entrepreneurs need further investigation for potential variances. Equally, the business owner personality and the self-employed personality should be investigated in adequate cohorts.

Second, the answers for each of the sub-questions are outlined and compiled into the default entrepreneurial types, where two are significant, the Synnovation Entrepreneur and the Team Entrepreneur, followed by the budding entrepreneurs, the Adventurer and the Rebel, who need support to fulfil their potential. Also, the environmental key subjects that shape the innate affinities of the entrepreneurs into their area of interest along with considerations of passive and active impact have been explored. Finally, the consistent component of entrepreneurs is presented with the preferred leadership behaviour.

Third, the detailed insights from the intertwined relationship induce a sustainable concept and respond to the research question by a definition accumulated from categories, typologies, crucial personality traits and preferred behaviour of entrepreneurs that are displayed simple in the flower model of entrepreneurial STAR-personalities.

Finally, the perspectives are debated in regard to practitioners, academics, professionals dealing with entrepreneurs, and policy-makers in relation to future entrepreneurial foci in research and applied handling.

9.1 CONCLUSION IN SHORT

The purpose of this research is first and foremost to enhance the scientific acquaintance towards entrepreneurs, clarify the challenges of the measurement methods, and put forward solutions for the intersectional and cross-disciplinary doubts. Unfortunately, clear and significant statements are scant with subjects related to intangible, unknown and immeasurable parts of human nature such as the entrepreneurial personality. Hence, an explorative study in cross-disciplinary research

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fields by means of abductive methods provides multiple empirical findings and complex theoretical analyses. Thus, these conclusive findings are presented regarding personality, environmental impact, and leadership in relation to the basic substance of the entrepreneurial personality.

The ultimate conclusion regarding the entrepreneurial personalities relates to the main research question on how the entrepreneurial personality is constituted and the three sub-questions on the core personality, the balance of nature and nurture and the implication of leadership (see also Figure 26, The entrepreneurial personality scope):

DEFINITION 17 OF THE ENTREPRENEURIAL PERSONALITY

The entrepreneurial traits are the origin of an entrepreneur, environment shapes how and when the entrepreneurial activity emerges and leadership defines if the entrepreneurial activity takes place and its nature and extent.

Without considering the personality, one cannot truly apprehend an entrepreneur. Hence, personality traits determine the typology of the entrepreneur - and thereby the nature of the entrepreneurial activity, besides the basic characteristics of the leadership behaviour - and thereby the size of the entrepreneurial business.

In addition, the traditional comprehension of entrepreneurs composes of three categories being self-employed individuals, business owners and distinctive entrepreneurs, where self-employed and business owner are discharged in this connection. The entrepreneurial category consists of dissimilar entrepreneur types with diverse preferences and abilities due to differences at personality trait level, and the successful entrepreneur is presumably a Synnovation Creator comparable to an entrepreneurial leader. The entrepreneurial personality comes into play whenever the circumstances leave room for it.

According to the nature-nurture debate, an entrepreneurial personality consists of a set of innate personality traits that are innovative, powerful and persevering. Concurrently, the environment influence massively in the content of the entrepreneurial activity, which is also affected by the individual's active choices throughout life.

In relation to leadership, the analytical results clarify that innate personality traits are inevitable in recognising an entrepreneur together with developmental goal-setting and experimental problem-solving behaviour in regard of taking lead in the entrepreneurship process. Definitely, leadership is an innate part of the entrepreneurial personality besides conscious behavioural improvements along the way.

Finally, the discovery of four essential entrepreneurial types (see section 8.3) with common centre of traits is pictured in the STAR flower of entrepreneur personalities consisting of the Synnovation entrepreneur, the Team entrepreneur, the Adventurer entrepreneur, and the Rebel entrepreneur:

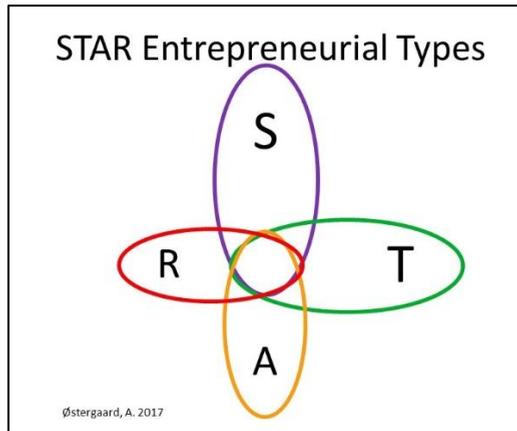


FIGURE 27 THE STAR FLOWER OF ENTREPRENEURIAL TYPES

Expectantly, the STAR flower of four essential entrepreneurial types reminds scholars, teachers and policy makers to have a renewed focus at the individual entrepreneur and the actual qualities and weaknesses to be considered in future relationships.

9.2 THE ENTREPRENEURIAL PERSONALITY SUPPLEMENTARY EXPLAINED

A critical eye (Weick, 1999) activated an explorative search with both surprising and expected results. Above all, the entrepreneurial personality must be seen as a psychological concept explaining the behaviour of specific types and not others. The individuals possessing an entrepreneurial personality are characterised by a preference for perceiving, thinking, and behaving entrepreneurial primarily in relation to vocational choices throughout life.

9.2.1 THE BENEFICIAL SEGREGATION INTO CATEGORIES

The investigation advocates for different types of entrepreneurial individuals who possess different types of personality and therefore are not all identified by the term: "Entrepreneur" as they were similar. Thus, derived from the analysis the main reason for blurred entrepreneur definitions is that we are dealing with different kinds of entrepreneurs that are in temporal coincidental vocational coherence.

The analysis establishes a segregation between self-employed individuals, business owners, and entrepreneurs, because it is obvious and measurable for the majority of interested parties. However, the three separated categories occur as a result of the empirical analyses of personality traits and leadership preferences of one entrepreneurial cohort, and as such the details will probably vary in future research of large cohorts.

The relevance of separating an entrepreneur with an entrepreneurial venture from a business owner with, for instance, a small business is supported by the Carland's (1984): "A small business venture is any business that is independently owned and

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operated, not dominant in its field, and does not engage in any new marketing or innovative practices”, and

“A small business owner is an individual who establishes and manages a business for the principal purpose of furthering personal goals. The business must be the primary source of income and will consume the majority of one's time and resources. The owner perceives the business as an extension of his or her personality, intricately bound with family needs and desires.”

On the contrary:

“An entrepreneurial venture is one that engages in at least one of Schumpeter's four categories of behaviour: that is, the principal goals of an entrepreneurial venture are profitability and growth and the business is characterised by innovative strategic practices”, and

“An entrepreneur is an individual who establishes and manages a business for the principal purposes of profit and growth. The entrepreneur is characterised principally by innovative behaviour and will employ strategic management practices in the business” (Carland et al., 1984).

In fact, Carland et al. (1984) seems to have been prescient in claiming: “We are changing small business owners into entrepreneurs and changing the concept of a venture which can support a family into the concept of a venture that can create major wealth within the region.” Accordingly, many terms like entrepreneurs, self-employed and businessmen are used indiscriminately in colloquial language and prompt difficulties in operationalization and measurement (Wennekers & Thurik, 1999). In additionally, the term team entrepreneur refers to a group of owners and managers of the same firm (Ensley, Garland, & Carland, 2000), which includes family firms as the most common example (Ucbasaran et al., 2003).

However, a revised description in three categories is provided below due to slight amendments of for example “working for the purpose of profit” and the term “small business owner” in order to disseminate a future, more precise term than usually colloquially used to identify an entrepreneur:

Description of the Self-employed Category

The self-employed individual is characterised by autonomy in one-man-enterprises in well-known types of businesses as hairdressers, greengrocers and so on, which are requested in the community. They earn their own salary and often they pay a number of freelancers or full-time helpers as well. The self-employed pay taxes and maintain subcontractors, and generally they cause no trouble for society. At a personal level, they praise the freedom to determine the pace, the amount and the kind of work, which often is the root cause of their motivation to be self-employed.

Description of the Business owner Category

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The business owner runs a business. An example is a family business of several generations, where the business owner is in charge of allocating the skills of each family member and first and foremost ensures steady revenue to be shared among the selected stakeholders. Comparable, the business can be an individual, team or group-launched business consisting of various numbers of employees. The main purpose is the operation of the plant, company or SME with enough incremental development to keep the business running. Growth is not a goal in itself.

Description of the Entrepreneur Category

The entrepreneur is constantly launching a new idea, venture, or project, and the entrepreneurial pattern outlines new startups in the current subject of interest yearly. In fact, usually the entrepreneur operates with several potentials at the same time to select from according to the current opportunities. At a personal level, an entrepreneur continues throughout life with serial enterprise launchings or new radical innovations connected with demanding efforts. Occasional, the entrepreneurial activity moves into other fields such as charity, using the entrepreneurial personality to find superior solutions. It happens that the entrepreneur slows the pace due to strokes or life issues and settles as a business owner or equivalent while maintaining the next generation of growth endeavours.

As a consequence, the general interpretation of an entrepreneur being idea-generating is no longer equivalent with all the three categories, only with the four entrepreneurial types in the entrepreneurial category. Hence, the notion is that the distinction between the self-employed individual, the business owner and the entrepreneur should be used in relation to occupational issues, research and support, and the term entrepreneur reserved for the entrepreneurial types.

Subsequently, the developed definition of an entrepreneur (Section 8.1 and Definition 12) support future researchers and policy makers with necessary details, including the complexity of Schumpeter, and emphasise the personality of the innovative entrepreneur (Andersen, 2011).

In relation to policy, the differentiation into three categories is exceedingly imperative. Hence, societal efforts for a sustainably developing environment in all parts of the country or all neighbourhoods in the city need emphasising self-employed individuals and business owners due to their natural community cohesion. Thus, a financial subsidy worth one employer's taxes is valuable if the business owner hires five new employees. Often, the business owner is not motivated for export possibilities unless corresponding advice is available.

However, in periods of crisis as well as prosperity, supportive policy to enhance the numbers, the quality and the character of entrepreneurial results is beneficial due to their talent of launch unrevealed products. In general, the entrepreneurs benefit from assistance of various experts, such as when attempting to produce a prototype.

Moreover, in relation to research, the differentiation offers more precise studies in accordance with societal purposes such as financial wealth, sustainable renewable solutions and societal well-being. In addition, new research fields dealing with idea-creators, founders and the innovative mindset deserve corresponding attention.

9.2.2 THE ENTREPRENEURIAL PERSONALITY IS THE PREREQUISITE BEGINNING

In addition to the formerly unified “entrepreneur”, now the categories Self-employed, Business owner, and Entrepreneur, a description of the entrepreneurial personality clarify the ability to launch new ideas; intangible and tangible projects; incremental as well as radical concepts, and to be in charge of realising dreams.

This entrepreneurial personality is at a personal level characterised by innate traits of innovation and leadership, where the minimum requirement is positive values in the four basic significant personality traits described in relation to the theoretical entrepreneur: Autonomy, Exploration Drive, Preparedness for Change, and Self-preservation Instinct amended with the derived traits from the factor analysis: Creative Drive, Dominance, Passion, Risk Willingness, Self-confidence, and Will of Delegating supplemented with the six dominating traits from the four most distinctive entrepreneurial types. However, the exact traits need to be confirmed additionally.

Accordingly, a future differentiation of the entrepreneurial personality is preferably based on a representative sample of the entire population in order to categorise creativity, inventors, open-mindedness and the like and make meaningful distinctions between for example the capacity for creating adaptive incremental ideas and explorative radical ideas.

In regard to the research question and the connected sub-questions, the investigation gained new multifaceted knowledge and insight into the core of the entrepreneurial personality and prompt the development of the personality scope model (see Figure 26 in section 8.7) and a contemporary definition of the personality (see Definition 1) and of the entrepreneurial personality (see Definition 17). Ultimate, leadership is an innate intertwined part of the entrepreneurial personality that shapes the entrepreneurial business in size and endurance.

In supplement to innate abilities, a predominantly positive environment impacts the entrepreneur in regard to upbringing, life-changing events, role models and diverse kinds of support throughout life. A crucial point to the born or made discussion is that the entrepreneurial personality depends on both-and instead of either-or in a unique counterbalanced pattern determining the entrepreneurial endeavour.

In general, an entrepreneur is born with the prerequisite skills for the entrepreneurship process and is impacted by environmental support from family, relations, institutions and industry, which together in a complex pattern form the entrepreneurial activity, the time for the activity and the content of the entrepreneurial activity.

Additionally, the majority of the cohort of the empirical analysis meets the definition, albeit to different degrees. Fortunately, the diversity of current active entrepreneurs spurred the theoretical development, even though some ought to reconsider

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themselves as being entrepreneurs and instead label themselves as self-employed or business owners in the future.

9.3 ENTREPRENEURIAL PERSONALITIES IN PERSPECTIVE

All in all, the comprehensive survey on active entrepreneurs produced a broad insight into the entrepreneurial personality; however, a future measurement with quantitative validations of the categories of self-employed individuals and business owners besides the entrepreneurs would be desirable. Additionally, large-scale validation of the essential points is needed using a sample representative of the general population in relation to culture, development levels and correspondence with entrepreneurs.

Besides natural continuations of this survey and theoretical research, future research avenues could move in several directions. One is to investigate similarities between the pathways of psychological structures corresponding to economic outcomes and sociological structures impacting economic outcomes (Granovetter, 1973; 1985; 1992; 2001; 2005). Another is to address gender objectives in relation to leadership due to the gender skewness in this empirical cohort in line with other scholars in the field (e.g., Harrison, Leitch, & McAdam, 2015; Harrison & Leitch, 2005; Henry et al., 2015; Leitch, McMullan, & Harrison, 2013; Lewis, 2015), and also in entrepreneurship (e.g., Bowen & Hisrich, 1986; Gupta et al., 2009; Hisrich & Brush, 1987; Jones, 2014).

Research concerning the impact of entrepreneurs on the environment is an obvious avenue. Entrepreneurship supplements or surpasses the efforts of governments and NGOs to achieve environmental sustainability, since entrepreneurs 1) address environmental uncertainty, 2) provide innovation and 3) engage in resource allocation to address environmental degradation (York & Venkataraman, 2010).

Clearly, society gains from entrepreneurs who manufacture, export products and employ staff, and a societal calculation must include those facts. However, from a societal point of view, the main profit is gained by picking the right entrepreneurs early on to ensure a good start with adequate support that results in an upward-sloping curve. “Small business owners create and grow family ventures every day. They are extremely vital to the well-being of the economy and are greatly desired as drivers of local economic development” (Carland et al., 1984).

Additionally, society and investors might have an enhanced probability of success from the knowledge revealed about the specific varieties of entrepreneurial personalities and their related perspectives. Thereby, investments reach broader than usual investment calculation relying on the value of the enterprise by sale, merger or acquisition or by enough revenue to meet the payback contract. Hence, the initiator of successful ideas and the right sorts of entrepreneurs to accomplish the idea’s potential can now be identified in for instance start-ups and serial enterprises. Besides, the usual investment viewpoint with gain from revenues (e.g., 25 percent in 5 years), promising patents, equipment products, add-ons or general accessories with a potential for mass production or massive sales might now add on promising entrepreneurial types with their unique personality, background and acquired skill as objective for investments.

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Concerning the findings, then measuring the full personality profile is relevant to explain the characteristics of the actor as with the negative correlations to the personality traits Structuring Capacity and Adaptation Capacity. Likewise, a survey on a representative part of the entire population in relation to the entrepreneurial personality might reveal additional entrepreneurial types with related traits such as Serendipity, Teleological Compass, Paradox Elasticity and corresponding factors confirming personality characteristics of success (Østergaard, 2003).

Generally, a large-scale survey that reassesses the research design would reveal information beyond the anonymised examples from the cohort. Thus, the precise description of each category would improve due to exact personality traits. In addition, large-scale data from a representative population would increase our knowledge of similarities and differences between inexperienced and experienced entrepreneurs contemporarily with precise information about the potential entrepreneurial types, the well-functioning type and the surviving type. Also, a data expanding of leadership behaviour and knowledge of entrepreneurial teams ranging from traditional family firms to current team firms would be beneficial.

Moreover, investigation has been suggested into the general behavioural and cognitive dynamics of an entrepreneurial team (Ensley et al., 2000) and the cognitive patterns that differentiate entrepreneurs from non-entrepreneurs, and in between the categories inspired from think aloud-protocol (Ericsson & Simon, 1980; 1987; 1993; Lewis, 1982). In general, future measurement of entrepreneurial personalities is assumed to add new knowledge by results of e.g., scanning and DNA measurement and knowledge from other research fields such as cognition and intelligence. Additionally, future personality research help resolving the tension between biological and social psychological models, the impact of unconscious processes on behaviour and the application of psychological theory to real-world issues (Boyle et al., 2008).

Finally, time deficiency seems to be the largest obstacle for an entrepreneur due to the number and character of challenges. Thus, they need to be provided with individualized assistance as opposed to standardised aid programs. Unconventional support might be the most substantial need, such as free accounting assistance, free day care for children or free tidying-up. Hence, the availability of governmental support must be broadened to reach the vast majority of individual entrepreneurs. Thus, it appears that societies would benefit from task forces available for entrepreneurs along with a sort of economical safety net at the disposal during the first three years.

Rogers (1961) found that,

“This process of the good life is not, I am convinced, a life for the faint-hearted. It involves the stretching and growing of becoming more and more of one's potentialities. It involves the courage to be. It means launching oneself fully into the stream of life”.

In closing, it is my hope that this research within the entrepreneurial personalities may serve as an incentive for a new era in understanding entrepreneurs.

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APPENDIX

CONTENT LIST

Appendix 1 Questionnaire themes and examples of question content

Appendix 2 An overview of the literature review

Appendix 3 Description of the 27 leadership roles

APPENDIX 1

1. QUESTIONNAIRE THEMES AND EXAMPLES OF CONTENT:

Demographic background

1. Facts of personal characteristics
2. Gender
3. Birthday
4. Current marital status
5. Children
6. Educational knowledge
 - 6.1.1. Last education
 - 6.1.2. Comments in relation to education
7. Occupation as a resource of knowledge and identification
 - 7.1.1. Previous occupations
 - 7.1.2. Current occupation (several answer possibilities)
8. Leadership experience
9. Experience of leadership in at least one year and the level hereof: operational, tactical or strategic with the possibility of several answers
 - 9.1.1. Number of year as leader
 - 9.1.2. Number of employees
 - 9.1.3. Comments in relation to leadership
10. Enterprise – firm demographic characteristics
 - 10.1.1. Type of enterprise or firm (several answer possibilities)
 - 10.1.2. Launching year of first firm /enterprise
 - 10.1.3. Statistical information about firms
 - 10.1.3.1.1. Number of firm ownership or co-ownership
 - 10.1.3.1.2. Number of firm launch
 - 10.1.3.1.3. Number of firm bankruptcy
 - 10.1.3.1.4. Number of closed firms
 - 10.1.3.1.5. Number of firm merge and acquisitions
 - 10.1.3.1.6. Number of firm name shift
 - 10.1.4. Description of current activity in enterprises/firms
 - 10.1.5. Reason for firm launching: Opportunity versus Necessity plus Ambition
 - 10.1.5.1.1. Comments in relation to launching
 - 10.1.6. Statistical information about inventions
 - 10.1.6.1.1. Number of inventions
 - 10.1.6.1.2. Number of patents
 - 10.1.6.1.3. Number of registered trademarks
 - 10.1.7. Decisive event of launching firm/enterprise
 - 10.1.7.1.1. Descriptive comments
11. Illumination of the health and interests of entrepreneurs
12. Health

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- 12.1.1. Current health
 - 12.1.1.1.1. Number of medical assistance in the last 3 years
 - 12.1.1.1.2. Number of hospitalizations in the last 3 years
 - 12.1.1.1.3. Description of reason for assistance or being hospitalized
- 12.1.2. Description of eventual chronically or inherited diseases
- 13. Interest duration in time
 - 13.1.1. Weekly duration in hours of
- 14. Sport
- 15. News
 - 15.1.1. Monthly duration in hours of
 - 15.1.1.1.1. Voluntary work
 - 15.1.2. Annual duration in hours of
- 16. Scientific literature
- 17. Fiction/film/entertainment
- 18. Social media
 - 18.1.1. Description of the highest prioritized leisure pursuit
 - 18.1.2. Description of the next highest prioritized leisure pursuit
- 19. Board activity
 - 19.1.1. The number of different kinds of board positions in business, organisations or alike
 - 19.1.1.1.1. Current number of board positions included chairman—and how long on average
 - 19.1.1.1.2. Current number of chairman positions – and how long on average
- 20. Current number of previous board positions included chairman – and how long on average
 - 20.1.1.1.1. Current number of previous chairman positions – and how long on average
- 21. Talent and talent development
- 22. Description of topics that the entrepreneur in relation to others has proved especially good at
- 23. Description of topics that the entrepreneur has done in a time duration of at least 10,000 hours
- 24. Description of topics that the entrepreneur has done in time duration of at least 30,000 hours
- 25. Role models
 - 25.1.1. Description of the individuals that has been a role model for the entrepreneur
- 26. Life-changing events (positive and negative)
 - 26.1.1. Descriptions of events which has impact on your life
 - 26.1.2. Explanation of the impact
- 27. Family data as a supplement to the discussion of inheritance in entrepreneurship and to the identity creation of the entrepreneur
- 28. Fathers, mothers and all grandparents' birthday, education, main occupation, last occupation, highest and next highest prioritized interest.

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29. Comments in relation to siblings and half siblings
30. Comments in relation to children
31. Comments in relation to family, also other family members
32. Interest in having a personality profile in return
33. Interest in being contacted again for further questions and alike

APPENDIX 2

2. AN OVERVIEW OF THE LITERATURE REVIEW

| Literature review: Leadership in Entrepreneurship literature June 2013 | | | | |
|--|-------------------------------|-------------------------------|---|---|
| Entrepreneurship and Small Business Management (ABS) | | | | |
| Journals Grade 4*, 4 and 3 | Search string Leadership (AB) | Search string Leadership (SU) | Articles from Search string: Leadership (SU) | Keywords/SU from articles (Relevant keywords in relation to entrepreneurial personalities in capital letters) |
| Journal of Business Venturing | 14 | 5 | (Li, 2013; Laspita, Breugst, Heblich, & Patzelt, 2012; Ensley, Pearce, & Hmieleski, 2006; Gupta et al., 2004; Smilor, Gibson, & Kozmetsky, 1989) | ENTREPRENEURSHIP; LEADERSHIP; Business models; Business development; Data analysis; Economic impact; Cross-cultural studies; ENTREPRENEURSHIP; LEADERSHIP; Competition; ENTREPRENEURSHIP; LEADERSHIP; New Business Enterprise; ORGANIZATIONAL BEHAVIOUR; Economic development; LEADERSHIP; Strategic alliances; New business enterprises; Business development; Markets; Business--Research; Infrastructure; SENIOR LEADERSHIP TEAMS; Research and Development in the Social Sciences and Humanities; UNCERTAINTY |
| Entrepreneurship: Theory and Practice | 17 | 14 | (Sciascia, Mazzola, & Chirico, 2013; Pearson & Marler, 2010; Walske & Zacharakis, 2009; Kuratko & Audretsch, 2009; Ivanova, 2009; Sandberg, 2003; Kets de Vries & Florent-Treacy, 2003; Sharma, | Executives; Small business-management; Business ethics; Industrial management; SOCIAL networks; DECISION MAKING; LEADERSHIP; ENTREPRENEURSHIP; ORGANIZATIONAL BEHAVIOUR; Belarus; Other Individual and Family Services; Education; ENTREPRENEURSHIP; LEADERSHIP; Industrial management; Tariko, Roustam; LEADERSHIP; ENTREPRENEURSHIP; Industrial management; Tariko, Roustam; Kets de Vries, M.F.R.; Family-owned business enterprises; LEADERSHIP; Stockholders; International economic relations; Statistics; Succession; PERFORMANCE; ENTREPRENEURSHIP; Family-owned business enterprises; LEADERSHIP; Strategic planning; Business ethics; Business; ENTREPRENEURSHIP; LEADERSHIP; Corporate governance; Business planning; Business incubators; BUSINESS INTELLIGENCE; SENIOR LEADERSHIP TEAMS; Family-owned business enterprises; Family-owned business enterprises-management; ENTREPRENEURSHIP; Relatives; Families; LEADERSHIP; Family-owned business |

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| | | | | |
|---|---|---|--|--|
| | | | Chrisman, Pablo, & Chua, 2001; McCline et al., 2000; Gagnon, Sicotte, & Posada, 2000; Sharma & Chrisman, 1999; Dess, Lumpkin, & McGee, 1999; Hoy & Verser, 1994; Daily & Dalton, 1993) | enterprises; Industrial relations; Personnel management; Human Resources Consulting Services; Administration of Human Resource Programs; Stewards; SOCIAL EXCHANGE; Small business investment companies; Critical success factor; EXECUTIVE ABILITY (Management); SENIOR LEADERSHIP TEAMS; Business consultants; New business enterprises; ENTREPRENEURSHIP; Business conditions; Theory of the firm; ENVIRONMENTAL SCANNING; Venture capital; Administrative Management and General Management Consulting Services; Theory & practice; Strategic planning; ENTREPRENEURSHIP; Competitive advantage; Organizational sociology research; New business enterprises; Planning; ORGANIZATIONAL EFFECTIVENESS; LEADERSHIP; EXECUTIVE ABILITY; Business models; BEHAVIOURAL ECONOMICS; Economic development; Theory & practice; OPPORTUNITY; EXECUTIVES; LEADERSHIP; EXECUTIVES-ATTITUDES; BUSINESSPEOPLE; Associations, institutions, etc.; Technology; Trust, Fiduciary, and Custody Activities; BEHAVIOURISM (Psychology); Executors & administrators; Research; ENTREPRENEURSHIP; BUSINESSPEOPLE; Medical care; Industries; Management; LEADERSHIP; Corporate governance; Business enterprises; LEADERSHIP; ENTREPRENEURSHIP; Business; ENTREPRENEURSHIP; Corporate governance; BUSINESS INTELLIGENCE; Industrial management; Management; LEADERSHIP |
| International Small Business Journal | 5 | 4 | (McAdam, Moffett, Hazlett, & Shevlin, 2010; Ghobadian & O'Regan, 2006; Gray & Mabey, 2005; Stavrou, 2003) | Small business-management; Innovations in business; LEADERSHIP; Total quality management; Structural equation modeling; Business-Research; Small business; ORGANIZATIONAL BEHAVIOUR; LEADERSHIP; STRATEGIC PLANNING; Corporate culture; Research and Development in the Social Sciences and Humanities; PERFORMANCE; Small business-management; EXECUTIVES-Training of; LEADERSHIP; Europe; European Union; Professional and Management Development Training; COMPETITION; Business planning; Corporate turnarounds; STRATEGIC PLANNING; LEADERSHIP; Industrial management |
| Entrepreneurship and Regional Development | 4 | 1 | (Gordon, Hamilton, & Jack, 2012) | ENTREPRENEURSHIP; Business education; Small business; LEADERSHIP; Economic development; EXECUTIVES; Innovations in business; Colleges, Universities, and Professional Schools; Business and Secretarial Schools |
| Small Business | 4 | 4 | (Vallejo, 2011; | Corporate culture; Family-owned business enterprises; Business literature; Social groups; |

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| | | | | |
|--------------------------------------|----|---|---|---|
| s Economics | | | Eijkkel, Hermes, & Lensink, 2011; Randøy, Dibrell, & Craig, 2009; Fabling & Grimes, 2007) | TRANSFORMATIONAL <i>LEADERSHIP</i> ; Field theory (Social psychology); <i>Business</i> enterprises; <i>LEADERSHIP</i> ; <i>Business</i> conditions; Corporate governance; Profitability; Sweden; Families; COMPETITION; Corporate profits; <i>Business</i> enterprises; Social responsibility of <i>business</i> ; Consumers; Technological innovations; <i>LEADERSHIP</i> ; Capital investments; Export marketing; New Zealand; <i>LEADERSHIP</i> ; LEADERS; ENTREPRENEURSHIP; SUPERVISION; Empirical research; Benchmarking; Equilibrium |
| Journal of Small Business Management | 18 | 8 | (Fitzgerald, Haynes, Schrank, & Danes, 2010; Stavrou, Kleanthous, & Anastasiou, 2005; Entrialgo, 2002; Arasli, 2002; O'Gorman & Doran, 1999; Daily & Dalton, 1992; Cunningham & Lischeron, 1991; White, 1972) | Social responsibility of <i>business</i> ; Family-owned <i>business</i> enterprises; <i>Small business</i> ; BUSINESSPEOPLE; <i>LEADERSHIP</i> ; Surveys; Total quality <i>management</i> ; Hotels; Economic models; Organizational structure; <i>LEADERSHIP</i> ; Cyprus, Northern; Hotels and Motels; <i>Business-research</i> ; ENTREPRENEURSHIP; Industrial <i>management</i> ; BUSINESSMEN; CORE COMPETENCIES; <i>LEADERSHIP</i> ; ORGANIZATIONAL BEHAVIOUR; Corporate culture; Research and Development in the Social Sciences and Humanities; Theory of knowledge; <i>Business</i> enterprises; Big <i>business</i> ; <i>Small business</i> ; <i>LEADERSHIP</i> ; Financial performance; Corporations; Complex organizations; Organizational sociology; DECISION MAKING; CONTROLLERSHIP; EXECUTIVE ABILITY; United States; <i>Business</i> enterprises; <i>Small business</i> ; ENTREPRENEURSHIP; <i>LEADERSHIP</i> ; Organizational structure; STRATEGIC PLANNING; Corporate culture; <i>LEADERSHIP</i> ; ORGANIZATIONAL BEHAVIOUR; Family-owned <i>business</i> enterprises; Cyprus; <i>Business</i> planning; STRATEGIC PLANNING; <i>Small business</i> ; EXECUTIVES; <i>LEADERSHIP</i> ; Spain; Occupational training; <i>Small business-Management</i> ; Associations, institutions, etc.; <i>LEADERSHIP</i> ; EXECUTIVE ABILITY; United States; Vocational Rehabilitation Services |
| Strategic Entrepreneurship Journal | 0 | 0 | | |

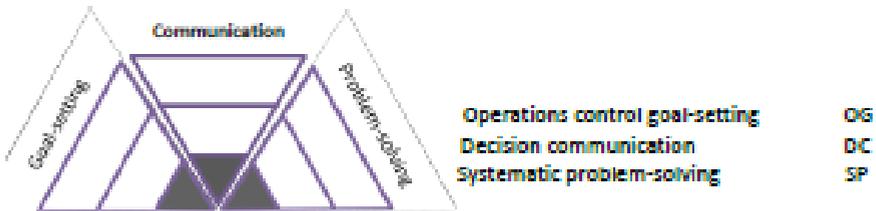
APPENDIX 3

3. DESCRIPTION OF THE 27 LEADERSHIP ROLES

In order to make it possible to interpret and overview 27 leadership roles, the roles are shortly described below with the same systematic as in the theory: First, nine goal-setting operating roles; second, nine goal-setting adaptations roles and; third, nine goal-setting development roles.

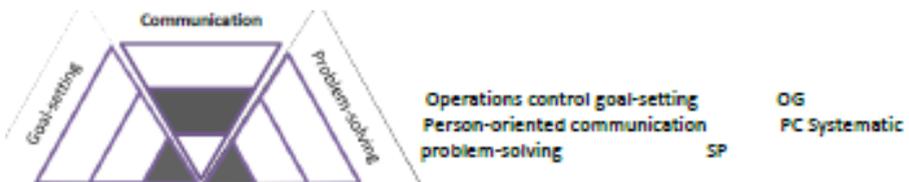
5.1 OPERATING ROLES

5.1.1 The Administrator Role (1)



The Administrator is a leader role characterised by operational objectives as numbers, formulations, and degrees of realism formulated as qualitative or quantitative, a desired optimum or a desired satisfaction, and as a minimum demands and maximum tolerances. The Administrator is extremely time- and resource consuming in daily management and problems are solved by analysis and synthesis of the properties qualitative-quantitative, time and perspective (Johnsen, 2002, p. 579).

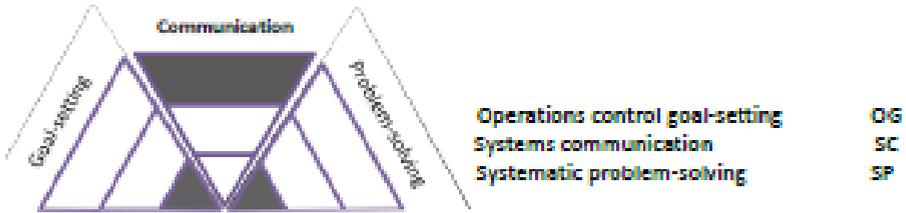
5.1.2 The Diagnostician Role (2)



The Diagnostician leader role emphasise efficiency, well-being and personal satisfaction. The Diagnostician judge and describe objectively the firms behaviour complex and behavioural processes in a clinical way with a number of analysis and synthesis models (Johnsen, 2002, p. 579).

APPENDIX

5.1.3 The System Constructor Role (3)



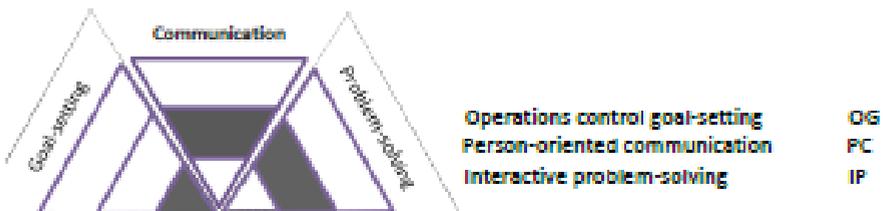
The Systems Constructor is a leader role systemising an experienced chaos analytically, building a system pure analytically, or meets a number of external demands often from stakeholders. The Systems Constructor does not question the demands, but take them, by definition, for granted, and then construct elements and relations, each providing the necessary and sufficient properties for the construction of interconnected sub-systems (Johnsen, 2002, p. 579).

5.1.4 The Group Leader Role (4)



The Group Leader is an active participant ensuring the function of the group. The Group Leader contributes to the organisation of the immediate environment on such conditions that efficacy and social well-being are combined by facilitating a more efficient decision-making process and solving problems through dialogues (Johnsen, 2002, p. 579).

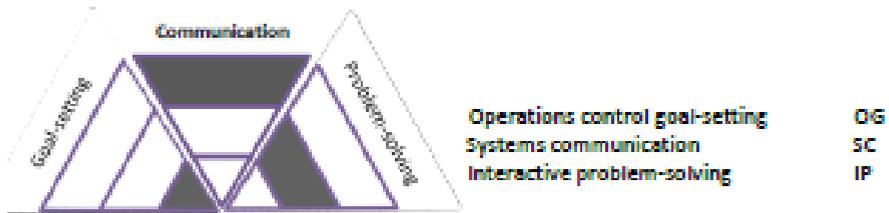
5.1.5 The Sparring Partner Role (5)



The Sparring Partner is a leader, who on a consultative or advisory basis, help a person function better within the context of the operational situation, or moderate by motivating a collective search-learning process within groups and organisations combining the aspects of different attitudes, feelings, an information surfacing during a collective debate (Johnsen, 2002, p. 579).

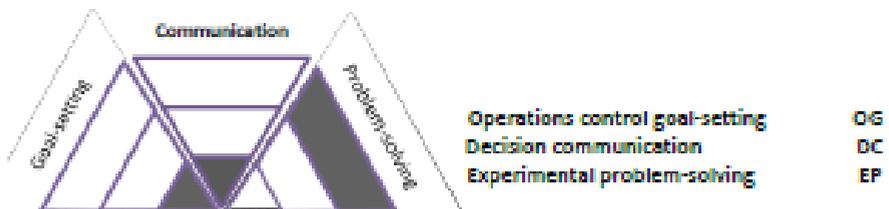
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5.1.6 The Meeting Conductor Role (6)



The Meeting Conductor achieves the actual objectives of a meeting by both technical aspects and the social process. Ideally, The Meeting Conductor ensures that the meeting function as a managerial forum, where each participant actively contribute to the development of the meeting and ensure the fulfilment of present objectives (Johnsen, 2002, p. 579).

5.1.7 The Controller Role (7)



The Controller is a leader role that through decisions enable management improving operations by a continuously improvement of the operations control situation. Changes are primarily made by the individual employee or by the responsible group (Johnsen, 2002, p. 579).

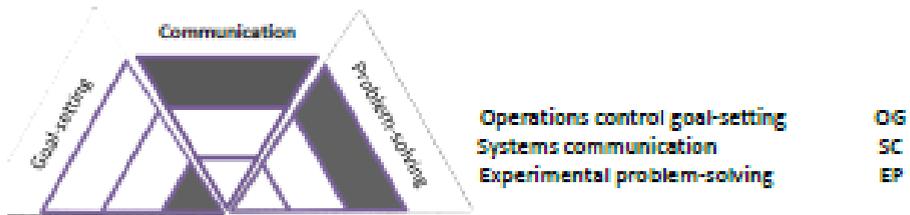
5.1.8 The Arbitrator (8)



The Arbitrator leader role implies being instrumental in providing colleagues with the possibility of doing what they want to do but feels consciously or unconsciously inhibited from doing through a learning process in the improvement of operations. Hence, The Arbitrator manipulate, but manipulation which people want in order to gain opportunities, otherwise not attainable (Johnsen, 2002, p. 579).

APPENDIX

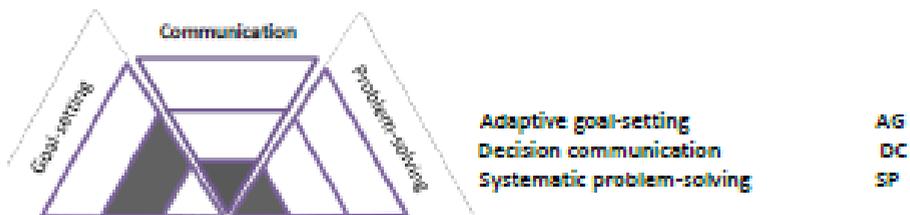
5.1.9 The Experimenter Role (9)



The Experimenter is a passive leader role, if everything is in order. Otherwise, the Experimenter with both attitude and skills continuously try to make daily operational systems of both people and machines more efficient, including involving the risk of no immediate results. In that way, the Experimenter sees trying something new as part of a normal life (Johnsen, 2002, p. 579).

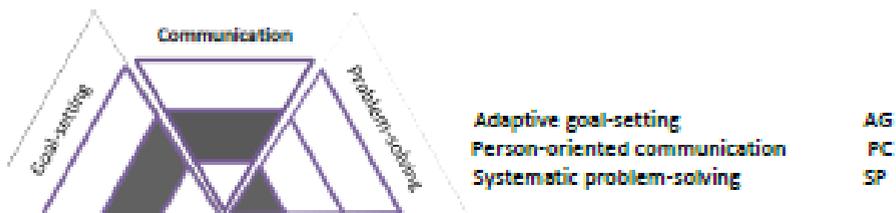
5.2 ADAPTATIONS ROLES

5.2.1 The Coordinator Role (10)



The Coordinator is a leader role applying analytic and synthetic methods, when collecting and processing information before necessary redistribution of the scarce resources. “Every employee has to play a coordinator role from time to time in order to adapt his or her own activities to changes in the conditions of the immediate environment” (Johnsen, 2002, p. 579).

5.2.2 The Process Tactician Role (11)

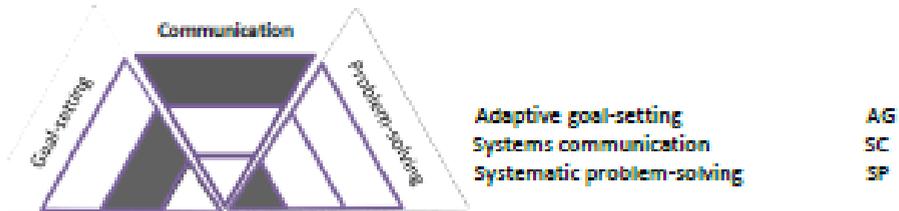


The Process Tactician leader role accomplishes behavioural changes with or without people’s consent. The process tactics are in everyday speech called manipulation and involves analytic planning to influence the behaviour of other people in such a

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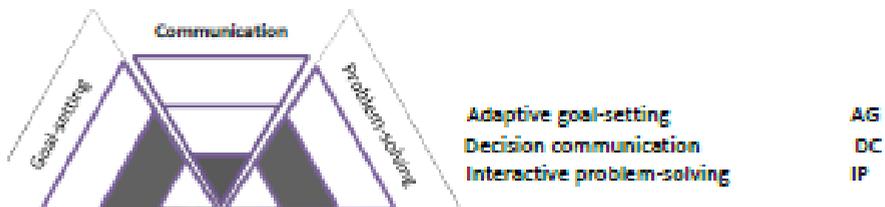
sequence and with such consequences that own goals are attained (Johnsen, 2002, p. 579).

5.2.3 The Reorganiser Role (12)



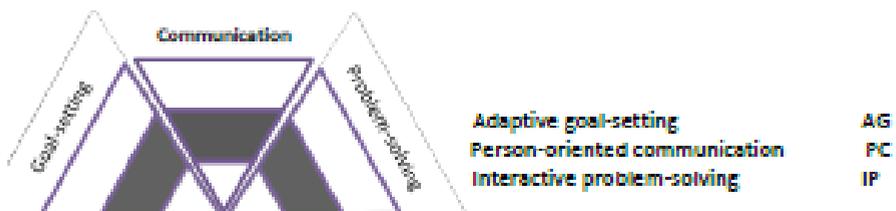
The Reorganiser is a leader role concentrating on obtaining “ideal system”. The Reorganiser designs an organisation which is able to function under new conditions i.e. to satisfy both new and old demands during a transition period (Johnsen, 2002, p. 579).

5.2.4 The Politician Role (13)



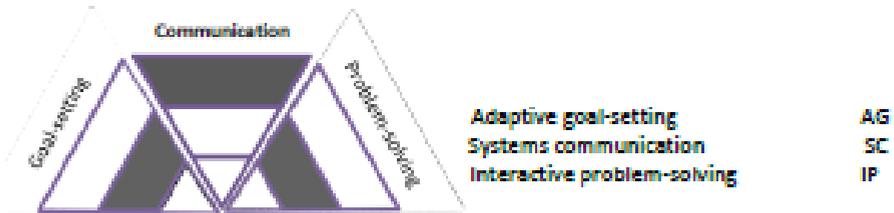
The Politician is a leader role, characterised by power goals, power means and a power base. Thus, the Politicians ambition is to gain power and to use this power to attain other goals, each stage of a solution of a factual problem is considered whether a solution is beneficial to personal or group’s power position (Johnsen, 2002, p. 579).

5.2.5 The Process Consultant Role (14)



The Process Consultant leader role enhances and speeds up the interaction between people in order to change and adapt their behaviour to new external conditions, because the behaviour has to change in matter to survive. Preferable the Process Consultant catalyses the process as an enzyme without taking part personally, and the skills are needed whenever an outer change force human beings’ to change behaviour (Johnsen, 2002, p. 579).

5.2.6 The Stakeholder Consultant Role (15)



The Stakeholder Consultant leader role ensures a mutual exchange of informations between each single involved stakeholder. The good Stakeholder Consultant listens to people and answer their questions by providing information derived from other stakeholder groups and by being persuasive in performing all stakeholder group's ideas to be accepted and included in the adaptation process (Johnsen, 2002, p. 579).

5.2.7 The Idea Creator Role (16)



The Idea Creator leader role organise the interaction of the individual idea creation itself, the systematic testing of new means, and the organisational learning process. In management, these three elements are necessary for a creation process. The Idea Creator leader introduces thoughts and ideas, which were rejected when things went well (Johnsen, 2002, p. 579).

5.2.8 The Environment Creator Role (17)

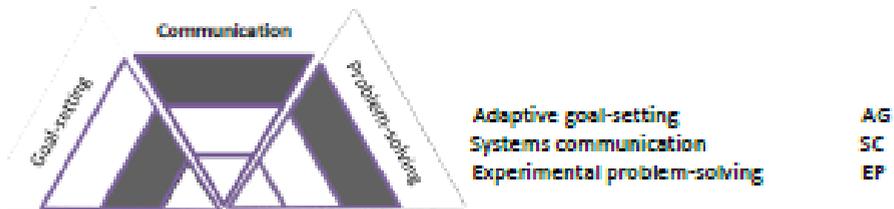


The Environment Creator leader role create environment, which is long-term susceptible to changes and possess the capacity that regards change as natural and stability as unnatural by continuously receiving signals from the surrounding world

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and change the structure and the function of the company in time to avoid a sudden crisis with destructive adaptations (Johnsen, 2002, p. 579).

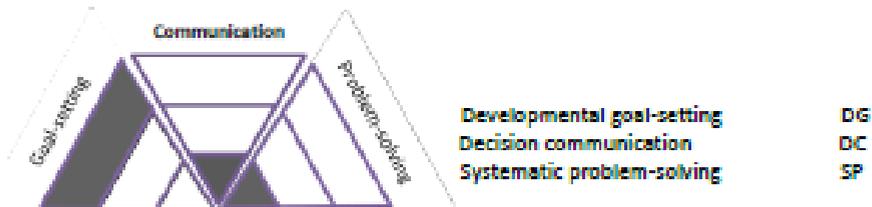
5.2.8 The Teacher Role (18)



The Teacher leader role contributes to the creation of a learning environment and is not a teaching technician. The Teacher make the individual, the group, the organisation, and the stakeholder groups aware of the importance of supplying new information to improve the situation by a current re-formulation of objectives, an improved intelligent problem solving, and a continuous change of the immediate social environment (Johnsen, 2002, p. 579).

5.3 DEVELOPMENT ROLES

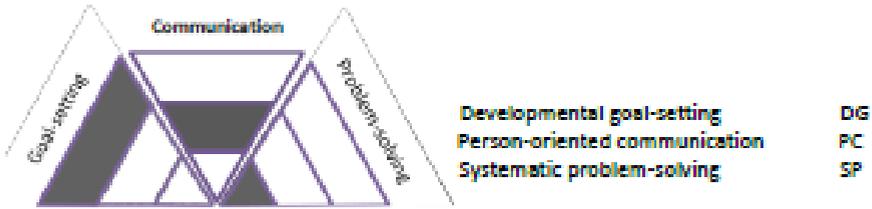
5.3.1 The Strategic Planner (19)



The Strategic Planner leader role continually reformulates the strategic problem complex in order to answer the strategic ends related to the strategic means, and proposes a continual strategy for solving problems by releasing latent energy and supplying with new energy, and third defines development projects considering the ideal coalition, ideal transformation and management system (Johnsen, 2002, p. 579).

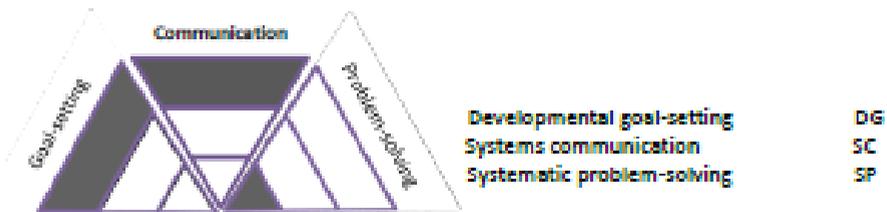
APPENDIX

5.3.2 The Stakeholder Analyst (20)



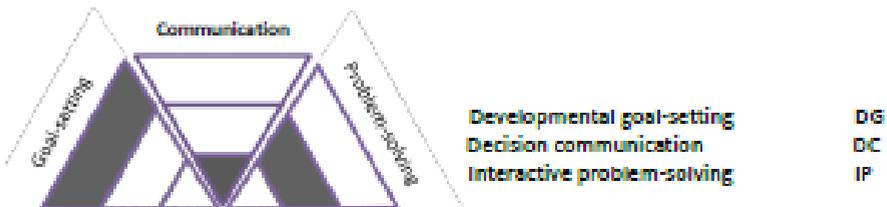
The Stakeholder Analyst leader role is concerned with the development of the firm, part of which is perceived as a system of stakeholders. The Stakeholder Analyst formulates the strategic objective for the firm as a whole and describes the firm's strategic developmental phase and process from a historic and a visionary perspective, and finally creates an image of the complete sets of interests of the multifarious stakeholder groups (Johnsen, 2002, p. 579).

5.3.3 The Philosopher (21)



The Philosopher leader role explores the core of the system as well as its boundaries. The Philosopher defines the present and the future mission of the system, the ends and the means agreed on by the coalition partners and expose the talents needed to implement a structural, managed development process (Johnsen, 2002, p. 579).

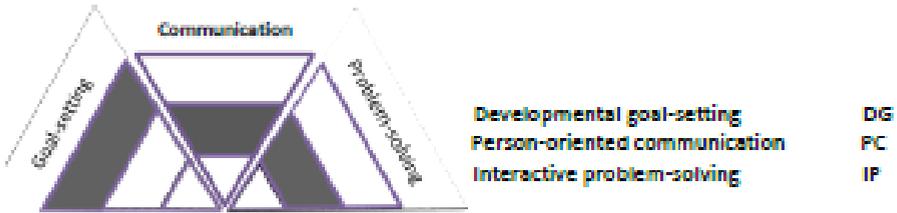
5.3.4 The Organiser Role (22)



The Organiser leader role organise development behaviour of individuals, groups, and the organisation to be more expedient. The Organiser works interactively to develop decision policies that ensure the human behaviour function as a social organism in a harmonic development (Johnsen, 2002, p. 579).

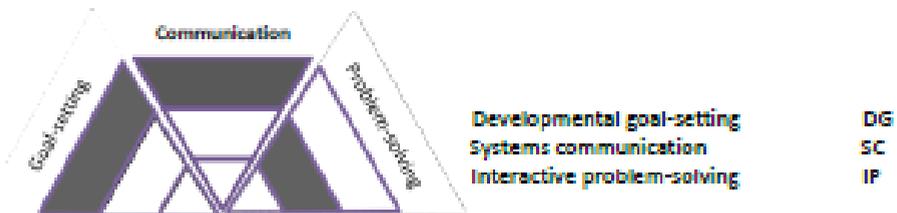
ENTREPRENEURIAL PERSONALITIES

5.3.5 The Learner Role (23)



The Learner leader role applies new knowledge and is influenced by the immediate surroundings. The Learner is committed in absorbing, identifying or creating the right sources for this new knowledge and converts this vast amount of information into something to be applied for own personal development as well as in the development of the organisation (Johnsen, 2002, p. 579).

5.3.6 The Communicator Role (24)



The Communicator leader role creates communication within the management of development, and thereby within the stakeholder system, the organisational behavioural system, the transformation system and the management system itself. The Communicators task of limiting the communicative assignment and making it linguistic is complicated, because it is an integral part of both managerial behaviour and of the management process (Johnsen, 2002, p. 579).

5.3.7 The Entrepreneur Role (25)



The Entrepreneur leader role initiates new activities based on an unquenchable flow of ideas. The Entrepreneur is able to make things connect and create synergetic value by formulation of the objectives for the alteration process, generation of the resources required by the alteration process' required resources, and development of the alteration itself (Johnsen, 2002, p. 579).

5.3.8 The Strategist Role (26)



The Strategist is a leader role, where the objective is to actively participate in shifting the basic foundation for the firm's existence by deploying the search-learning process as a problem-solving tool while expressing the world perception verbally through the use of behavioural languages. Results are achieved through the implementation of various types of initiatives concerning individuals, immediate environment, organisational coherence (structure and function), political and value based behaviour besides a problem-solving methodology with a combination of strategic, innovative and political management processes (Johnsen, 2002, p. 568 - 572).

5.3.9 The Statesman Role (27)



The Statesman is a leader role for which one is elected or legitimated in accordance with the representatives with legal responsibility in the organisation. A performance based on two arguments: Credibility in relation to the convictions of the electorate or the authorities and an ability to transform one's power into results desired by the same parties by managing available resources (Johnsen, 2002, p. 579).



SUMMARY

The objective is to investigate what constitutes the entrepreneurial personality in terms of innate and learned personality characteristics and how these relate to environmental impact and leadership. Starting with a cross-disciplinary literature review, data were collected from 55 active entrepreneurs through a standardised personality test, a leadership preference test, and a questionnaire. These double-tested data provided significant results.

The thesis suggests that the concept of an entrepreneur should be divided into three different categories: Self-employed, Business owner and Entrepreneur. Additionally, within the entrepreneur category four typologies are displayed: Synnovation Entrepreneur, Team Entrepreneur, Adventurer and Rebel. Moreover, the research finds that the set of personality traits necessary for an entrepreneur consists of Autonomy, Exploration Drive, Preparedness for Change, and Self-preservation Instinct.

In conclusion, the entrepreneurial traits are the origin of an entrepreneur and the environment shapes how and when the entrepreneurial activity emerges. Moreover, leadership defines the nature and extent of the entrepreneurial activity and whether it takes place at all.