

CAN NOVICE ENTREPRENEURS USE EFFECTUATION DURING THE CREATION OF THEIR FIRST REAL-LIFE VENTURE? AN ACTION RESEARCH EXPERIMENT

Marleen Klein Ikink

Department of Business Administration

Master Track Innovation & Entrepreneurship

19-03-2013



CAN NOVICE ENTREPRENEURS USE EFFECTUATION DURING THE CREATION OF THEIR FIRST REAL-LIFE VENTURE? AN ACTION RESEARCH EXPERIMENT

SUPERVISOR:

Dr. Ir. Jeroen Kraaijenbrink

University of Twente, School of Management and Governance

Department of Business Administration

Email: j.kraaijenbrink@utwente.nl

STUDENT INFORMATION:

Marleen Klein Ikink

Heelweg 8, 7134 PB Vragender

Student number: s1054171

Email: marleenkleinikink@hotmail.com;

m.kleinikink@student.utwente.nl

COURSE:

Master Track Innovation & Entrepreneurship

Department of Business Administration

University of Twente

DATE:

19-03-2013

PREFACE AND ACKNOWLEDGEMENT

I grew up in an entrepreneurial family in which it was not a discussion if entrepreneurship could be learned; it is something you are, or not. In order to find out more about entrepreneurship, I decided to study the Master program Innovation & Entrepreneurship. During the past years, I became to realize that entrepreneurship is more than something that you are or not. Especially after some courses which included aspects of effectuation, I became more and more convinced that entrepreneurship is a skill that can be learned through experience and deliberate practice. The interesting question for me was whether entrepreneurship could also be learned at universities, after all, I am studying *entrepreneurship*. That is one of the reasons why I decided to try out in practice if I could create a venture with using the theory that I learned during the master track. To that end, I have followed the effectual logic during my first real-life venture creation process. For me personally this was a challenge because I was always told that I could rather be typified as a manager instead of an entrepreneur. I have engaged in this process together with my partner and student colleague Wouter Lamers. This means that we both performed the role of researcher and entrepreneur simultaneously, which made this period quite a challenge. Everything was new and many decisions had to be made. This resulted in a situation in which both the Master Thesis and the new venture creation process were equally important. Fortunately, both these projects turned out to be very interesting and fruitful contributors to my future. First of all, a surprise for me was that the Master Thesis research had potential to be published in a recognized business venturing journal. Due to this opportunity, I got the chance to develop myself in the field of effectuation and doing research on scientific level. Secondly, at time of this writing I have created a real-life venture in the hospitality industry together with my partner. We have done this according the logic of effectuation, which directed us to be i.e. creative and cooperative. After a process of 7 months, the ‘Fabulous Food Truck’ is ready for take-off and the first assignments for our venture are already a fact. To that end, for me, it is not a question anymore if entrepreneurship should be something you are or not. This Master Thesis has

proven the contrary: entrepreneurship can be learned in theory and subsequently be put in practice. Though, when deliberately applying effectuation and if you have the courage and motivation to go for it.

I would like to thank Wouter for his enthusiasm and support during the process, and for creating a venture together with me. I have learned a lot of him and really valued his opportunism and drive to be different. Moreover, I would like to thank Professor J. Kraaijenbrink for his input and guidance throughout the graduation project, and for the opportunity that he gave me to participate in writing a scientific paper. Finally, I would like to thank all the participants of this research, and the other persons whom contributed to the new venture creation process in some sort of way. Without interaction and commitment of these stakeholders, I could not have finished my Master Thesis and created the 'Fabulous Food Truck'.

Vragender, 19-03-2013

ABSTRACT

It is suggested that education might be an important contribution to entrepreneurship, which in turn is an important factor for enhancing economic development. This study focuses on the question what should be taught at universities and business schools in order to educate students (novice entrepreneurs) for entrepreneurship. One stream of literature that suggests to contribute to this question is effectuation. Sarasvathy (2001) found that expert entrepreneurs base their decision making on the logic *'to the extent that we control the future, we do not need to predict it'*, since they often face unpredictable and uncertain situations. This seems to be a very interesting add-on for entrepreneurship education. However, the current literature on effectuation is based on expert entrepreneurs, who are by definition not representative for the whole population of entrepreneurs, which also includes novices. Moreover, the general focus of current research is on the five principles that are formulated by Sarasvathy (2001; 2008) rather than on the process model, which illustrates the new venture creation process under effectual conditions. Therefore, the aim of this study is to contribute to the effectuation literature by an in-depth process study of effectuation applied by novice entrepreneurs in real-life situations, in order to find out if effectuation is a fruitful contribution to entrepreneurship education. I do this by applying action research as method, and simultaneously engaging in real-life new venture creation together with a student colleague. During a process of 7 months, we deliberately applied a variety of effectuation heuristics and reported our findings in personal diaries. By coding the qualitative data, this action research experiment provides new and detailed empirical insights into the dynamics of effectuation and into the effectual behaviors of novice entrepreneurs. For instance, the results suggest three distinct phases of the effectual process, various degrees of stakeholder commitments, and a focus on *transparency* and *versatility* as add-on evaluation and decision making criteria. Based on these findings, I introduce an adjusted process model of effectuation in order to make the effectuation theory more applicable for novice entrepreneurs in real-life unpredictable situation. This means that, overall, I can conclude that novice

entrepreneurs can use effectuation as method, but only with some modifications of the process model. The findings of this study imply that the process model of effectuation is suitable as entrepreneurial method to teach and offer students at universities and business schools. Effectuation might be a good attempt to bridge the gap between purely theoretical teaching and real-life practical experiences as the theoretical construct is empirically evidenced as practical and normative method for novice entrepreneurs. Therefore, I suggest that adding effectuation as entrepreneurial method to the curriculum of entrepreneurship programs might be fruitful for the relevance and adequateness of these programs.

CONTENT

1. INTRODUCTION	9
1.1. ENTREPRENEURSHIP EDUCATION	9
1.2. EFFECTUATION AS ALTERNATIVE APPROACH TOWARDS ENTREPRENEURSHIP	11
1.2.1. CONCEPTUALIZATION OF EFFECTUATION	12
1.3. RESEARCH GOAL	13
1.3.1. NORMATIVE APPROACH TOWARDS ENTREPRENEURSHIP	15
1.4. RESEARCH QUESTIONS	16
1.4.1. DEFINITIONS	17
1.5. RESEARCH STRATEGY	17
2. LITERATURE REVIEW: EFFECTUAL HEURISTICS	18
2.1. EFFECTUAL PROBLEM SPACE	20
2.2. PROCESS MODEL OF EFFECTUATION	21
2.2.1. GENERALIZED ASPIRATION	23
2.2.2. MEANS; WHO I AM, WHAT I KNOW AND WHOM I KNOW	23
2.2.3. GOALS; WHAT CAN I DO?.....	26
2.2.4. INTERACT WITH PEOPLE I KNOW	30
2.2.5. STAKEHOLDER COMMITMENT	32
2.2.6. CHANGES IN THE ENVIRONMENT (LEVERAGING CONTINGENCIES)	36
2.2.7. NEW FIRMS, NEW PRODUCTS, AND NEW MARKETS	40
2.3. OVERVIEW OF THE EFFECTUAL HEURISTICS	40
2.4. EXPECTED DIFFERENCES BETWEEN EXPERT AND NOVICE ENTREPRENEURS	41
3. METHODOLOGY	43
3.1. RESEARCH SETTING AND GENERAL APPROACH	43
3.2. DATA COLLECTION: MEMOS AND DIARIES	45
3.3. DATA ANALYSIS AND CODING	47
4. RESULTS	49
4.1. THE VENTURE CREATION PROCESS OF THE FABULOUS FOOD TRUCK	49
4.2. THE EFFECTUAL PROCESS: DIVERGENCE, CONVERGENCE AND EXPLOITATION OF IDEAS.....	51
4.3. EASY TO EXPAND A LIMITED POOL OF RESOURCES THROUGH THE MEANS OF OTHERS	55
4.4. TRANSPARANCY IS NEEDED IN ORDER TO OBTAIN RESOURCES AND TO COMMIT STAKEHOLDERS	56
4.5. WHAT IS AN AFFORDABLE LOSS DEPENDS ON THE CONCRETENESS OF THE IMAGINED ENDS.	57
4.6. BEING CREATIVE ABOUT THE RESOURCES WE REALLY NEED IN ORDER TO COMMIT STAKEHOLDERS	58
4.7. AFFORDABLE LOSS DOES NOT ALWAYS WORK SUFFICIENTLY; INCLUDE VERSATILITY	58

4.8.	DIFFERENT DEGREES OF STAKEHOLDER COMMITMENT	60
4.9.	IMPROVE CHANCES TO COME ACROSS CONTINGENCIES CAN BE REGARDED AS VALUABLE ..	62
4.10.	OVERVIEW OF THE MAIN RESULTS OF THIS STUDY	63

5. DISCUSSION64

5.1	IMPLICATIONS	64
5.2.	LIMITATIONS AND FURTHER RESEARCH	69

6. CONCLUSION71

REFERENCES

APPENDIX 1. CODING SCHEME

1. INTRODUCTION

1.1. ENTREPRENEURSHIP EDUCATION

Around the world, entrepreneurship is at the top of the social, political and economic agenda (Kirby, 2005; Thurik, 2009) and there is an increasing tendency of government policy makers to develop and implement strategies that promote, enhance and sustain entrepreneurial activity (Reynolds et al., 2000). Already in 1934, Schumpeter remarked that entrepreneurship should be recognized as an important factor for enhancing economic growth and development. Also more recent econometric evidence suggests that entrepreneurship emerged into an engine and vital determinant of economic development and growth throughout the world (Reynolds et al., 2005; Thurik, 2009). This can be illustrated with the following statement of Kuratko (2005, p. 577): *“Entrepreneurship has emerged over the last two decades as arguably the most potential economic force the world has ever experienced.”* This means that stimulating entrepreneurship can be seen as an element of a broader strategy for enhancing economic growth (Reynolds et al., 2000). Accordingly, Reynolds et al. (2000) comment that one of the strategies that governments seek to employ is investing in education in order to nurture the development of entrepreneurship and subsequently stimulate increased levels of economic activity. Entrepreneurship education clearly has a huge impact on entrepreneurship since it ensures the supply of students who create new ideas, technologies, and knowledge which might lead to new business opportunities (Reynolds et al., 2000).

The most recurrent question within the discussion regarding entrepreneurship education is probably whether entrepreneurship can be taught (Fayolle & Gailly, 2008). Many people argue that entrepreneurship is a matter of personality and psychological traits. According them, entrepreneurship cannot be taught, they believe in the born entrepreneur (Fayolle & Gailly, 2008). However, one could argue that this is true for many professions and disciplines. Nobody will reject the fact that medicine, law, or engineering can be taught and yet there are doctors, lawyers and engineers who are talented and others who are not (Hindle, 2007). In this discussion, Hindle (2007,

p. 108) states that: *“No doctor is ever ‘born’. All are made: through education.”* That is not different for entrepreneurs because all aspirants have to learn their craft somehow (Hindle, 2007). Also Drucker (1985), one of the leading management thinkers, said: *“The entrepreneurial mystique? It’s not magic, it’s not mysterious, and it has nothing to do with the genes. It’s a discipline. And, like any discipline, it can be learned”* (Kuratko, 2005, p. 580). However, some entrepreneurs might be better than others, through a combination of different intrinsic and extrinsic factors (e.g. intelligence and education) and different levels of motivation (Hindle, 2007). So provided that one does not confuse the aptitudinal and motivational predicates of the student with the transferability of the subject matter, it is clear that the vocational aspects of entrepreneurship can be taught (Hindle, 2007) and that an entrepreneurial perspective can be developed in individuals (Kuratko, 2005). Thus, a more relevant question is: *What should be taught?*

Kuratko (2005) sees an increased interest in the field of entrepreneurship education. Entrepreneurship as a career option becomes increasingly desirable and there is a real need to develop an entrepreneurial mindset among students (Sardeshmukh & Smith-Nelson, 2011). Responding to this need, many universities and business school around the world have significantly increased their offerings of entrepreneurship courses over the past decades (Fayolle & Klandt, 2006). Entrepreneurship education has so far been developed as an add-on to business education. First as an elective course, then more courses, and finally as a concentration, major or separate program (Kuratko, 2005). According Sardeshmukh & Smith-Nelson (2011) current entrepreneurship education relies heavily on the linear process of business planning. Within that, the predominantly entrepreneurial decision model that is taught in many universities and business schools across the worlds is a goal-driven, deliberate model of decision making (Perry et al., 2012), which is called a *causal logic* by Sarasvathy (2001). Causal rationality seeks to identify the most optimal alternative to achieve a pre-determined goal and is useful when the goals are clear, the future is predictable and the environment is independent of the actions of the entrepreneur (Sarasvathy, 2001; 2008). Courses

with such a focus spend much time on teaching students the principles of market techniques, competitive analysis, and strategic and financial management of which calculating expected returns is an example (Dew et al., 2008). According Sarasvathy (2008) almost all that is taught in entrepreneurship programs can be seen as the *cookbook* of how to find financing.

1.2. EFFECTUATION AS ALTERNATIVE APPROACH TOWARDS ENTREPRENEURSHIP EDUCATION

In the past decade, scholars and academics posed more and more questions and remarks about this type of entrepreneurship education. For example, Kuratko (2005) argues that a core objective of entrepreneurship education should be that it differentiates from a typical business education, since business entry is fundamentally a different activity than managing a business. Kirby (2005) agrees with this by stating that entrepreneurship should not be equated with small business management because that stultifies rather than develops the requisite skills to produce entrepreneurs. In addition, Sardeshmukh & Smith-Nelson (2011) comment that many entrepreneurship programs do not facilitate entrepreneurship as a career option for their students; some programs may actually have the opposite effect of reducing the entrepreneurial intentions and motivation of their students. Also Sarasvathy (2001) questioned if it was truly *entrepreneurship* that they taught when referring to causation. After all, the more traditional type of reasoning (causation) assumes that the future is predictable while she found that entrepreneurs often face a complex and dynamic environment in which consumer demands change rapidly and tend to be rather inchoate. This means that entrepreneurs cannot always predict the characteristics of their entrepreneurial results (Bhide, 2000) as is the case with more traditional entrepreneurial theories like causation.

In order to find out how firms are created in unpredictable situations, on what principles expert entrepreneurs base their decision making, and what should or could be taught to potential entrepreneurs in the classroom in order to increase their chance of survival, Sarasvathy (2001) has

done entrepreneurship research. She was motivated to grasp the truly unique behaviors of expert entrepreneurs, which were often debated by practitioners and academics, but were never truly recorded before (Sarasvathy, 2001). This triggered her to do research by using *think aloud verbal protocol analysis* among 27 expert entrepreneurs in varying industries and markets. From this empirical basis, Sarasvathy (2001) found that these expert entrepreneurs were very strong in the way they approach problems in early stage venture creation in unpredictable and uncertain situations. As her research has shown, these entrepreneurs based their decision making on the logic: *'To the extent we can control the future, we do not need to predict it'* (Sarasvathy, 2001). This means that Sarasvathy (2001) found that there is a science to entrepreneurship and that expert entrepreneurs across industries, geographies, and time use a common logic, or thinking process, to solve entrepreneurial problems. She calls this the *effectual logic*. Effectuation can be seen as an important contribution to entrepreneurial thinking because it represents a paradigmatic shift in the way that entrepreneurship is understood (Perry et al., 2012). Both Sarasvathy & Kotha (2001) and Fisher (2012) propose the existence and use of effectuation as a viable alternative to the predictive causal rationality as it takes a different route in identifying and exploiting opportunities. Effectuation theory suggests that under conditions of uncertainty entrepreneurs do not base their decisions on prediction-based planning, but adopt a logic that focuses on the controllable aspects of an unpredictable future (Sarasvathy, 2001). Proponents of the effectual logic comment that effectual entrepreneurs engage in a dynamic process of creating new opportunities and artifacts in the world, which are in turn exploited and driven by the actions of entrepreneurs (Sarasvathy, 2008).

Within this it is important to note that effectuation and causation are not opposites but two alternate approaches that can be used in respectively unpredictable and predictable situations (Sarasvathy, 2001). The effectual logic is also illustrated as first and second gear; entrepreneurs need it to start their venture but eventually move away towards a more causal logic.

1.2.1. CONCEPTUALIZATION OF EFFECTUATION

Effectuation has been conceptualized in the form of a process model and as a set of principles. As a process model, effectuation focuses on the stages that entrepreneurs go through during new venture creation in an unpredictable situation. In this process, entrepreneurs try to satisfy their aspiration to become an entrepreneur by starting with the resources they have at their immediate disposal (Sarasvathy, 2008). Entrepreneurs imagine and implement possible effects that can be created with these resources and at the same time, set in motion a network of stakeholder interactions. It is suggested the each stakeholder makes commitments that on the one hand increases the resources available to the network, but on the other hand add constraints to the goals (Sarasvathy, 2008; Sarasvathy & Dew, 2005). Along the way, entrepreneurs leverage surprises or changes in the environment (Sarasvathy, 2008). This process ultimately results in entrepreneurs and stakeholders co-creating new opportunities that they could not have expected beforehand (Sarasvathy & Venkataraman, 2011). Underlying this process model are the five principles (as opposed to causation) of effectuation:

- *Bird-in-hand*: effectual entrepreneurs are means oriented rather than goals oriented.
- *Pilot-in-the-plane*: effectual entrepreneurs focus on control rather than prediction.
- *Affordable loss*: effectual entrepreneurs base their decision making on affordable loss rather than calculated return.
- *Crazy quilt*: effectual entrepreneurs seek partnerships rather than competitive analysis.
- *Lemonade*: effectual entrepreneurs exploit contingencies rather than pre-existing knowledge.

1.3. RESEARCH GOAL

Effectuation can be seen as an interesting stream of literature that is suggested to contribute to the question *what should be taught* at business school and universities in order to educate students for entrepreneurship. For example, Fayolle & Gailly (2008) argue that the theory of effectuation

might be a powerful means to differentiate entrepreneurial action and managerial action and might be used in the design of educational programs, in which potentially many novice entrepreneurs take part.

A relevant point of interest within this discussion is that Sarasvathy argues that effectuation is a logic of entrepreneurial expertise that all entrepreneurs can use in the highly unpredictable creation of a new venture (Effectuation.org), whereas Perry et al. (2012) comment that the current concept of effectuation arose out of a study regarding *expert* entrepreneurs, who should not be equated with the population of entrepreneurs as a whole, which also include *novice* entrepreneurs (i.e. students). Therefore, Perry et al. (2012) propose that studies which focus on effectuation concerning novice entrepreneurs are warranted. Papers, like those of Sarasvathy & Dew (2005) and Dew et al. (2008) already introduced the logic of effectuation to a control group of novice entrepreneurs in order to examine the difference in framing decisions between expert and novice entrepreneurs. In particular the novice entrepreneurs they studied were MBA students who were educated in the rather traditional management techniques. Not surprisingly, in these studies, novice entrepreneurs tended to use a different theory (causation) in their decision-making for new venture creation than the expert entrepreneurs (effectuation) who were experienced in creating new ventures. Along this line of reasoning, the question arises what would happen if these novice entrepreneurs were educated about the logic of effectuation. Would they also tend to use the underlying logic of effectuation in their decision making? Or even more interestingly: is the current logic of effectuation actually suitable for novice entrepreneurs to apply in practice? To that end, the focus of this study is on analyzing to what extent the current formulated effectual logic is suitable for novice entrepreneurs to apply in practice.

Another interesting void in the current effectuation literature is the small amount of research that focuses on the process model of effectuation. The empirical studies on effectuation that have been conducted (e.g. Chandler et al., 2011; Dew et al., 2009a; Sarasvathy & Dew, 2005; Harmeling et al., 2004; Harting, 2004; Sarasvathy & Kotha, 2001; Wiltbank et al., 2009) since its introduction

by Sarasvathy (2001) have particularly expanded knowledge and insights on the principles of effectuation. For example, Wiltbank et al. (2009) focused on control, and Chandler et al. (2011), Harmeling et al. (2004), Harting (2004) and Sarasvathy & Kotha (2001) focused on all the principles of effectuation. Although these studies have all contributed considerably to the understanding of effectuation, the effectual logic is simultaneously put forward as an inherently dynamic process of new venture creation in which interaction, commitment, co-creation, experimentation, and creative action allow the entrepreneur to continually transform extant realities into new possibilities as time passes (i.e. Dew et al., 2011; Sarasvathy, 2001; Sarasvathy & Dew, 2005; Sarasvathy & Venkataraman, 2011). Since this process has hardly been studied empirically, I have decided to particularly focus on the process model of effectuation within this study.

In sum, the aim of this Master Thesis is to contribute to the effectuation literature by an in-depth study of effectuation during the new venture creation process of novice entrepreneurs in an unpredictable situation. By doing so, this research will add some new insight on the questions whether the process model of effectuation is appropriate for novice entrepreneurs to apply in practice, and accordingly, whether it is adequate for including in educational programs regarding entrepreneurship. Note that this research will be executed in close cooperation with a student colleague who will do a similar study with the focus on the five principles of effectuation. This means that both perspectives of effectuation are covered.

1.3.1. NORMATIVE APPROACH TOWARDS ENTREPRENEURSHIP

The aforementioned assumption that entrepreneurial decision making is a skill instead of an inborn aptitude, suggests that effectuation can be seen as a teachable method. For example, Read & Sarasvathy (2005) argue that looking at entrepreneurship as an expertise enables scholars to identify testable elements of entrepreneurship that are teachable. Along that line, Sarasvathy & Venkataraman (2011) argue that it is useful and valuable to reformulate entrepreneurship as a method of human action, which is teachable to anyone who cares to learn and which can be

evidenced empirically. In this view, entrepreneurship is not just a natural behavior of expert entrepreneurs, but becomes a form of reasoning which could be viewed as a generalized method that is learnable and could be mastered by others (Sarasvathy, 2008). Though Davidsson (2005) states that Sarasvathy (2001) is tentative to point out that the effectual process, while descriptively valid in many cases, is not automatically normatively valid, the fact that effectuation is modeled on the behavior of experienced entrepreneurs indicates that it has some normative merit (Davidsson, 2005). Therefore, within this research, effectuation is considered as a normative method that entrepreneurs can use when creating a venture in an unpredictable situation. This means that the current process model of effectuation has to be *translated* into concrete and actionable heuristics that entrepreneurs can actually put in practice during their new venture creation process. This will be further clarified in Chapter 2.

1.4. RESEARCH QUESTIONS

In order to assess to what extent the current formulated process model of effectuation is applicable for novice entrepreneurs, and thereby suitable for entrepreneurship education, I have formulated the following main research question and subsequent sub questions.

Main research question. To what extent can novice entrepreneurs use the process model of effectuation during new venture creation in an unpredictable situation?

Sub question 1. Which effectual heuristics or behaviors can be formulated in order to provide a useful operationalization of the effectual process and to make it more actionable for entrepreneurs?

Sub question 2. Are there any problems or new insights that arise when novice entrepreneurs try to apply the effectual heuristics, and corresponding process model, during new venture creation in an unpredictable situation? If so, what are these and what are the underlying reasons?

Sub question 3. To what extent do the observed problems and/or new insights apply to novice entrepreneurs in particular, or can they be regarded as more general problems and/or new insights of the effectual process model?

Sub question 4. How can the effectual heuristics, and corresponding process model, be (re)shaped in order to overcome the observed problems and to include the new insights, and thereby be (more) applicable for novice entrepreneurs during new venture creation in an unpredictable situation?

1.4.1. DEFINITIONS

Novice entrepreneurs. Novice entrepreneurs are individuals with no prior business ownership and start-up experience (Dew et al., 2009a; Sarasvathy, 2008).

New Venture Creation. According Davison et al. (2004), new venture creation is also called simply entrepreneurship. Within this research, a new venture is created when the stakeholders agree upon a finalized business model that will be put into practice.

Unpredictable or uncertain situation. Uncertainty is a situation in which no historical data exists to help the decision maker. This means that it is a situation which is difficult or impossible to foretell or foresee and is unknown in advance (Read et al., 2011).

Heuristics. Experienced based practical behavior for operationalizing theories.

1.5. RESEARCH STRATEGY

Gathering data on individuals over time (longitudinal design) requires either retrospective recall or real-time data gathering (Perry et al., 2012). Much of the current empirical research in the field of effectuation is retrospective in nature, which is generally subject to recall bias, as Perry et al. (2012) comment. In response to this void in existing research on effectuation, scholars like Chandler et al. (2011), Davidsson (2003) and Perry et al. (2012) have called for longitudinal real-time process studies regarding effectuation specifically and entrepreneurship more generally. In order to answer to such calls, this research focuses on a longitudinal real-time process study of effectuation in order to

study the suitability of the process model of effectuation for novice entrepreneurs and education accordingly. Also some statements of other researchers motivated me to emphasize real-time data. For instance, Kurt Lewin (1952, p. 169) once stated that: “*There is nothing so practical as a good theory*”, and Brydon-Miller et al. (2003, p. 15) think that: “*Theory is only useful insofar it is put into the service of practice*”. In addition, Avison et al. (1999, p. 94) inspired me by commenting that: “*To make academic research relevant, researchers should try out their theories with practitioners in real situations*”.

Within this study, *action research* is used as research method to generate real-time data on the process model of effectuation. Action research focuses on practical problem solving and understanding complex processes in real-life situations, rather than in contrived situations as is common in more detached approaches (Baskerville & Harper, 1996). An important feature of action research is its contribution to the development of theory by accompanying practical actions with theory and subsequently evaluating the consequences. On the basis of this evaluation and the practical outcomes of the actions, the particular theory may then be supported or reshaped (Baskerville & Myers, 2004; Susman & Evered, 1978). This results in a situation in which theory and practice are intertwined in a single process (Baskerville & Meyers, 2004). When applying this characteristic to this study, this means that a real-life problem (creating a venture under unpredictable conditions) is systematically studied while driven and informed by the theory of effectuation.

2. LITERATURE REVIEW: EFFECTUAL HEURISTICS

As mentioned in Chapter 1, it is important for this study to *translate* the process model of effectuation into a list of concrete heuristics and behaviors in order to apply effectuation as normative method that is actionable for entrepreneurs during their new venture creation in practice. The current literature on effectuation provides a good starting point for this since there are various

contributions that explicitly attempt to make effectuation more practical and measurable. For instance, Chandler et al. (2007) have developed and formulated a number of practical items that can be used to measure the effectuation construct. In a later article, Chandler et al. (2011) have developed Likert-type measures that capture the effectuation construct more broadly. Also Read et al. (2009a) contribute to making effectuation actionable by describing specific insights into precisely measuring effectuation and by their book on effectual entrepreneurship which focuses on practical aspects and has an orientation for teaching (Read et al., 2011). Finally, based on these papers and Sarasvathy's (2001) initial paper on effectuation, Fisher (2012) has developed a list of effectual behaviors that also helps to make the effectuation construct more practical. All these studies contribute to my understanding of effectuation as practical construct, by providing useful operationalizations of the effectuation process. These operationalizations are adapted to describe the entrepreneurial heuristics and behaviors that, together, comprise the effectuation method.

This chapter will show this in depth literature review of the process model of effectuation and the corresponding translation of theory into heuristics/behaviors that are actionable for entrepreneurs. In order to be able to measure what I wanted to measure later on in the research, it was of utmost importance to make a good translation of the process model. This is explained as translation validity, which is part of construct validity (Babbie, 2010). More specifically, translation validity is divided into two parts: face validity and content validity. Face validity is subjectively assessed by analyzing the operationalization of the effectuation construct and deciding whether *on its face* it seemed to be a good translation of the construct (Babbie, 2010). Subsequently, I have checked whether the operationalization of effectuation captured the entire domain of effectuation as process model (Babbie, 2010). These subjective analyses have provided evidence for supporting both the face validity and the content validity of the construct of effectuation.

2.1. EFFECTUAL PROBLEM SPACE

First of all, it is important to understand the underlying problem space of effectuation. Sarasvathy (2008) views the effectual problem space as consisting of uncertainties that entrepreneurs face during their new venture creation process. According to Sarasvathy (2001) this is based on the work of Knight (1921) who proposes that prediction is impossible, Weick (1979) who states that the environment does not independently select the outcomes, March (1987) who argues that goals are not pre-determined, and Simon (1981) who thinks that human beings cannot be strictly rational.

- *Knightian uncertainty: it is impossible to calculate probabilities for future consequences.*

Knight's (1921) notion of true uncertainty points at the fundamentally unknown future that many entrepreneurs face when starting up their business. Under conditions of true uncertainty, probabilities of success are unknown and unknowable which means that it is impossible to calculate or predict probabilities for future consequences (Sarasvathy, 2008). Sarasvathy (2001; 2008) proposes that expert entrepreneurs refuse to trust predictions and instead focus on the controllable aspects of the unpredictable future in order to overcome the problem of Knightian uncertainty (Sarasvathy & Kotha, 2001). This mindset is particularly useful in areas where human action is the predominant factor shaping the future (Sarasvathy & Kotha, 2001). Instead of predicting the future, expert entrepreneurs confirm by experience what seems reasonable – what is doable and to them worth doing (Sarasvathy, 2008). Note that the focus on control does not imply that prediction is useless, it has its time and function (Read et al., 2011). Expert entrepreneurs should ask themselves the question if their environment is stable enough to reliably base future actions on data from the past (Read et al., 2011).

- *Goal ambiguity: preferences are neither given nor well ordered.* March (1987) argues that there is another uncertainty; the uncertain future preferences of entrepreneurs (Sarasvathy, 2008). This points at the essential goal ambiguity underlying many organizational decisions.

The effectual process model assumes that goals are initially ambiguous and become more specific over time (Kraaijenbrink et al., 2011). The end goals are the combined result of the imagination and aspirations of the entrepreneur and the people he/she has interacted with during the process (Read et al., 2011; Sarasvathy, 2008).

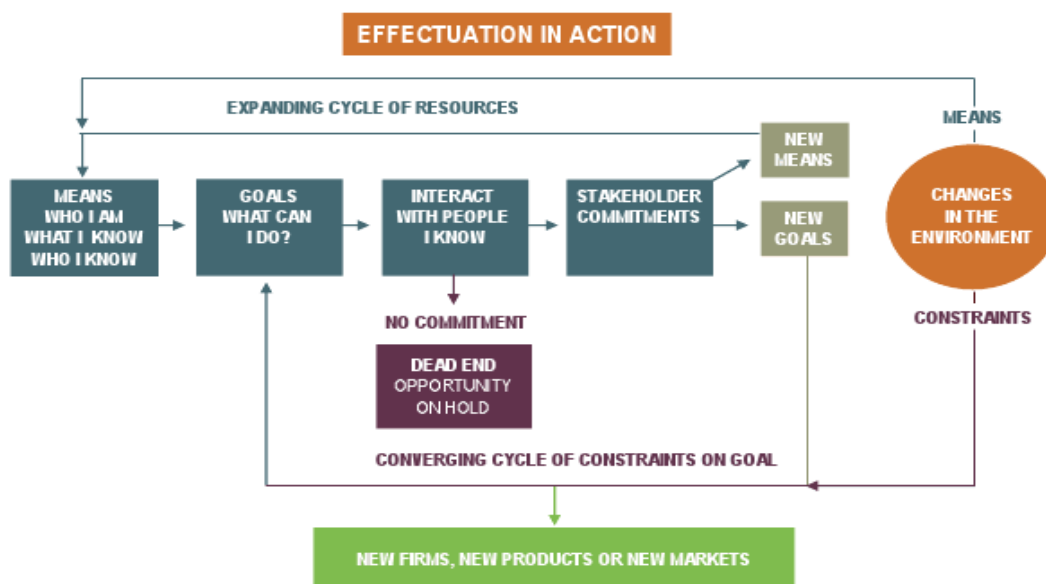
- *Isotropy: it is not clear ex ante what elements of the environment to pay attention to and what to ignore.* Sarasvathy (2008) argues that with decisions and actions involving uncertain future consequences, it is not always clear ex ante which pieces of information are worth paying attention to and which not. In response to this isotropy, Weick (1979) argues that opportunities are not out there to be discovered but are enacted by humans. It implies that entrepreneurs (decision makers) do not simply face an objective environment but rather select and create it through their actions (Sarasvathy, 2008). In line with this, Dew et al. (2008) and Sarasvathy (2001) comment that effectuators see the world as open, still in the making. They believe that there is a genuine role for human action in order to shape the future. Along this line, Simon (1996) notes that effectual entrepreneurship is not a social science, but rather a science of the artificial (Sarasvathy, 2008). This means that entrepreneurs design artifacts by focusing on what they can do, rather than continually worrying about what they are ought to do (Sarasvathy, 2008).
- *Bounded rationality: human beings are generally not strictly rational.* Simon (1959) comments that the rationality of human beings is bounded by cognitive limitations such as psychological constraints on computational capacity, and psychological limitations like biases and fallacies (Sarasvathy, 2008). Or as Sarasvathy & Simon (2000) state: “*Where do we find rationality when the environment does not independently influence outcomes or even rules of the game (Weick, 1979), the future is truly unpredictable (Knight, 1921), and the decision maker is unsure of his/her own preferences (March, 1982)?*” (Read & Sarasvathy, 2005, p. 14). Yet these findings do not imply that decision makers are irrational. If

entrepreneurs believe they are dealing with relatively unpredictable phenomena, they will try to gather information through experimental and iterative learning techniques aimed at first discovering the underlying distribution of the future (Sarasvathy, 2008). This means that an entrepreneur might be a satisfier, a person who accepts good enough alternatives, not because less is preferred to more but because there is no choice (Simon, 1996).

2.2. PROCESS MODEL OF EFFECTUATION

Effectual logic provides a way of thinking about making decisions when non-predictive control is required. The effectual process model represents the thinking process in a form used in creating products, markets and ventures. The following literature review aims to make the effectual process model, as illustrated in Figure 1, more actionable for entrepreneurs as it discusses the theory and translates this into a set of heuristics that are practical and uniquely apply to the challenges that entrepreneurs are bound to face.

Figure 1. Process model of effectuation.



Source: *Effectuation.org*

2.2.1. GENERALIZED ASPIRATION

Usually, all that effectual entrepreneurs know when they start out is something very general, such as the desire to make lots of money, to create a lasting institution, or to pursue an interesting idea that seems worth pursuing (Sarasvathy, 2001). Generally, this environment does not allow prediction because the market simply does not exist yet. This means that entrepreneurs cannot use techniques of market research and penetration, but should concentrate their efforts on creating a new market or artifact (Sarasvathy, 2001). Moreover, Sarasvathy (2001) argues that human life abounds in contingencies that cannot be analyzed and predicted but can only be seized and exploited. Thereby effectuators merely pursue an aspiration and visualize a set of actions for transforming the original idea into a firm, not into the particular predetermined or optimal firm, but a very generalized aspiration of a firm (Sarasvathy, 2001).

2.2.2. MEANS; WHO I AM, WHAT I KNOW AND WHOM I KNOW

Traditional entrepreneurial thinking (causation) typifies entrepreneurs as being goal-driven. This means that entrepreneurs select between means to achieve a predetermined goal (Read et al., 2011). Sarasvathy (2008) found that expert entrepreneurs are actually more means oriented, which means that they begin their venturing journey with imagining possible courses of action using a given set of means, in order to control the unpredictable future (Read et al., 2011). Since entrepreneurs use the resources they have already in their hands, they do not have to chase resources they cannot control (Read et al., 2011). This helps entrepreneurs to take action. It also means that expert entrepreneurs work with their strengths without having to overcome their weaknesses first. Lesson: *“Get away from what you don’t have and focus on what you have”* (Read et al., 2011, p. 74).

Sarasvathy (2001; 2008) found that expert entrepreneurs start their new venture creation process with the means that are readily available to them, which are:

- *Who I am.* This concerns the capital, assets, traits, tastes, and abilities of entrepreneurs themselves (Read et al., 2011).
- *What I know.* Relevant means for entrepreneurs are for example their entrepreneurial and partner experiences, experience in the chosen industry, education, training and expertise (Read et al., 2009a). This is unique to each individual entrepreneur because information is generated through idiosyncratic life experiences (Chandler et al., 2007).
- *Who I know.* This concerns the social and professional network of entrepreneurs, which consist of individuals, companies and organizations who might offer opportunities and resources to the venture creation process (Read et al., 2009a). Expert entrepreneurs are believed to build stable network out of people they already know, individuals they are connected to through others, and out of contingent interactions or serendipitous encounters (Read et al., 2009; Read et al., 2011).

Effectuation theory assumes that the pool of these means is the competitive advantage of entrepreneurs because no one else has the exact same set of means (Read et al., 2011). Who they are and what makes entrepreneurs unique could not only be the starting point, but also the basic ingredient of the venture and market opportunity entrepreneurs set out to create (Read et al., 2011). So, this means that the pool of resources contains the elements that generate significantly different ventures from two different entrepreneurs with the same starting point in the same environment (Read et al., 2011). As a remark, Read et al. (2009a) argue that while each individual is endowed with a wide range of means, only those means that are relevant to the venture constitute effectual means and should be considered during new venture creation.

Effectuation also involves seeking *slack resources* that are left over of other uses or are lying around because nobody had paid attention to them, and transforming them into valuable uses (Read et al., 2011). These resources can be of great use when creating a venture. Also thinking about exaptation – to use something for a purpose for which it was not originally designed or intended – is

a good way to think differently about means and resources (Sarasvathy, 2008). The notion that exaptation depends on putting given artifacts into a new context might suggest that having enough slack for some entrepreneurial experimentation with novel stakeholder combinations may be a useful organizational strategy (Dew et al., 2008).

The following heuristics are extracted from the above literature:

- 1) *Make an inventory of the readily available means.* The starting point for taking action under uncertainty is focusing on taking advantage of the entrepreneur's own means (Kraaijenbrink & Ratinho, 2010; Read et al., 2011). This means that entrepreneurs have to look back at their lives and sort out what means they have recruited or build along the way, which are relevant for the current situation. This inventory of *who they are*, *what they know* and *whom they know* can be included in Table 1 (Read et al., 2011). Since means are not static, the means that become available to entrepreneurs during the process of new venture creation, i.e. due to stakeholder commitment and contingencies, should be added to the pool of resources.

Table 1. Inventory of means/pool of resources

Who you know		What you know		Who you are	
Your 'social media' network		Prior knowledge of education, training and expertise		Tastes, values and preferences	
Friends, family and acquaintances		Knowledge from a job, industry or partnership		Skills and abilities	
Serendipitous encounters		Knowledge from your life		Interests and passions	
University links		Informal learning, and hobbies		Capital and assets	

Source: Read et al. (2011)

- 2) *Continuously look around for slack resources.* For entrepreneurs, it is important to look around for slack resources that are left over from other uses or lying around because nobody had paid attention to them, and to put these into valuable use.

ILLUSTRATION: Estée Lauder also used slack resources in the early stages of building her business. She had noticed that women sitting under hair dryers in beauty parlors had nothing to do with their time. So she offered them a free makeover using Estée Lauder creams and lotions. Most would accept and having actually experienced the benefits of the products would often buy at least some of them for home use (Read et al., 2011, P. 81).

2.2.3. GOALS; WHAT CAN I DO?

The focus of the entire decision making process for entrepreneurs is on what can be done, given who they are, what they know, and whom they know (Sarasvathy, 2008). Thus the next step in the effectual process becomes what effects entrepreneurs can create with the available means and resources (Dew et al., 2008). This means that effectual entrepreneurs begin with imagining several possible courses of action (Read et al., 2011). These are also called *imagined ends*.

The next step focuses on assessing whether and which imagined ends are believed worth doing (Sarasvathy, 2008). Since outcomes to novelty are by definition unpredictable (Dew et al., 2008; Blekman, 2011), these imagined ends are not assessed on their benefits but on their potential downside (Sarasvathy, 2008). This means that the question is not: “*What is the expected return of this venture concept?*”, but “*What can I afford to lose?*” (Blekman, 2011). This is explained as affordable loss. Fundamentally, affordable loss is based on things entrepreneurs know and can control. Hence, their decisions are not guided by unpredictable probabilities of the future, but by setting limits to what they can and are willing to afford to lose in order to start a venture (Sarasvathy, 2008). By making small bets, entrepreneurs make sure that when they fail it is not catastrophic (Read et al., 2009b). They make failure survivable by constraining the loss to something that they regard as affordable (Dew et al., 2009b; Sarasvathy, 2008). Next to that, effectual entrepreneurs prefer the

cheapest alternative and work hard to come up with creative ways of doing things at minimum expenditure of resources (Sarasvathy, 2008).

An advantage of using affordable loss is that rather than investing much time, money and managerial effort up front in market research, new ventures can move directly to selling a potential or actual product or service to customers on the basis of their own means (Blekman, 2011; Read et al., 2009b). In line with this, Read et al. (2011) suggest that entrepreneurs do not have to wait for the blockbuster idea or the multibillion dollar opportunity, but can begin with simple problems for which they can see an implementation solution and go for it. It is action that turns a mere idea into a valuable opportunity (Read et al., 2011). With regard to that view, effectual entrepreneurs tend to make use of experimental and iterative learning techniques in the business emergence process (Sarasvathy, 2001), which can be viewed as a series of affordable experiments to identify a business model that works (Chandler et al., 2007; 2011). While this tactic may have unintended consequences, such as under-investing in attractive options, it provides a means of achieving some control over the occurrence of failure (Sarasvathy, 2008) and over the risks entrepreneurs assume to exist (Read et al., 2011).

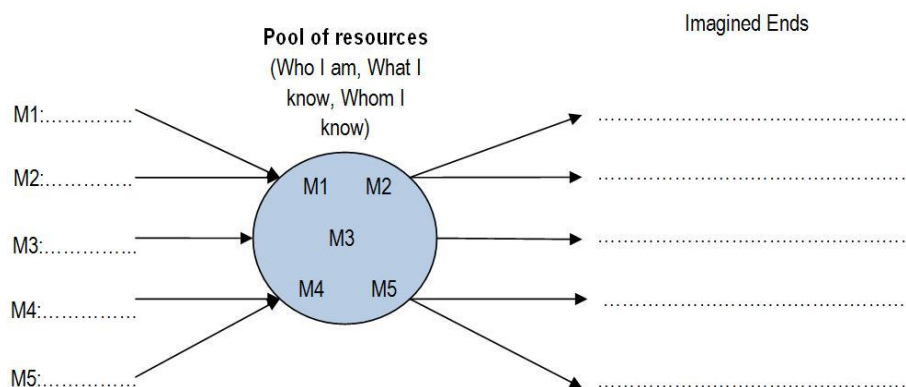
In short, entrepreneurs have to evaluate which imagined ends they can afford with the maximum investment that they are willing to lose (pay). Moreover, entrepreneurs should decide what minimum earning they need and want (Read et al., 2011). Typically, this approach provides a useful filter that reduces the number of possible courses of action that entrepreneurs can seriously consider and then leads to a go/no go decision on each of them (Read et al., 2011). After evaluating the imagined ends on the basis of affordable loss, entrepreneurs have to select the most interesting imagined end. Within that, they are advised to stick close to their means in order to start with those actions over which they have the greatest degree of control (Read et al., 2011), and to avoid courses of action that restrict the flexibility and adaptability of the venture creation process (Chandler et al., 2007; 2011). Subsequently, entrepreneurs should write an effectual business plan (Read et al., 2011),

which can be seen as a rhetoric tool for convincing venture capitalists or other investors of the viability of the business (Kraaijenbrink & Ratinho, 2010). This plan should remain flexible and adaptable, since effectuation allows decision makers to change their goals and even to shape and construct them over time, making use of contingencies and the input of stakeholders (Sarasvathy, 2001).

The following heuristics can be regarded as underlying this phase of the process model:

- 3) *Consider what could possibly be done with the readily available means and resources and imagine possible courses of action.* After entrepreneurs have made an inventory of their pool of resources, they have to consider what effects can be created with these resources. Entrepreneurs can visualize their imagined ends or courses of action in Figure 2. Note that at the same time these courses of action are co-determined by stakeholders who are willing to commit resources (Read et al., 2011).

Figure 2. Imagining possible courses of action based on the pool of resources



- 4) *Decide how much is really needed to start these courses of action.* When considering affordable loss, the first thing entrepreneurs have to do is asking themselves what they really need to start the courses of action. This means that they have to become creative about different ways of bringing the courses of action to the market, reducing the resources (e.g. cash) that they need,

and to make use of slack resources. Moreover, entrepreneurs can for instance think about how cash outflows can be delayed, how cash inflows can be accelerated, and how they get the impact of the output without producing it in advance (Read et al., 2011). As a tool, Read et al. (2011) advice to start from the estimated cost of the venture and to work hard and creatively to make that number zero.

5) *Decide what you are maximally able and willing to lose and what you minimally want to earn.*

The subsequent thing entrepreneurs need to think of is what they are really able and willing to lose and what they want to earn when starting a venture. Instead of calculating the opportunity costs of starting a venture in terms of the venture's future earning potential, two relatively simple values can be calculated (Read et al., 2011):

- Firstly, entrepreneurs should decide on the maximum amount they can afford to lose in the worst-case scenario (Chandler et al., 2007, 2011; Dew et al., 2009b). They can think about their time, effort and current financial conditions, such as long term savings and home equity. Subsequently, entrepreneurs have to think through how much they are willing to lose for the first imagined end that they will actually put in practice (Dew et al., 2009b). For instance, half of the amount they can afford to lose, so they can bet on two projects instead of one, in case the first one does not succeed (Dew et al., 2009b).
- Secondly, entrepreneurs should think about the minimum they want to earn during the start of the venture.

Subsequently, entrepreneurs have to evaluate which imagined ends they can afford with the maximum investment that they are willing to lose (pay), with minimum earnings they need.

6) *Consider which imagined end you feel comfortable with and select the most interesting course of action.* Entrepreneurs should decide which course of action they can comfortably take, even if

they lose the entire investment (Dew et al., 2009b). This means that entrepreneurs should also consider the non monetary benefits, like learning advantages, when considering which course of action is most interesting. When selecting this course of action, entrepreneurs should try to stay close to their means and avoid courses of action that restrict the flexibility and adaptability (Chandler et al., 2007). After deciding which imagined end is the most interesting for the moment, entrepreneurs have to develop an effectual business plan. This should be reduced to descriptions of the initial business idea that someone could understand in a few minutes (Read et al., 2011) and should be rewritten throughout the process.

2.2.4. INTERACT WITH PEOPLE I KNOW

Entrepreneurial action is above all interaction over time between stakeholders (Sarasvathy & Venkataraman, 2011). In this phase of the process, entrepreneurs start to reach out to other people in order to obtain advice and other inputs on how to proceed with some of the things they could (possibly) do (Read et al., 2011). The people they interact with could be potential stakeholders, friends and family or random people they meet in the routines of their lives (Read et al., 2011). So, the first action is almost always something that involves a stakeholder – a supplier who can provide something entrepreneurs need, a customer who may be interested in something the entrepreneur has to offer, or an acquaintance who brings new means (Read et al., 2011).

During the interaction with potential stakeholders and people they know, expert entrepreneurs pitch their effectual business plan in order to communicate and explain what it may take to co-create value for every involved stakeholder (Read et al., 2011). In order to determine what motivates potential stakeholders to commit their resources to the new venture creation process, entrepreneurs often just ask them what would convince them to join the co-creation process (Read et al., 2011). It is assumed that most people will actually explain what they want and what their motivations are for a potential commitment (Read et al., 2011). At minimum, potential stakeholders will give entrepreneurs honest and useful feedback, valuable lead(s), and/or give insight into the hidden

resources of the entrepreneur himself (Read et al., 2011). This part of the interaction phase might result in pre-commitment or otherwise in no commitment. Any interactions that fail to gain the traction of commitment are considered dead ends, at least for the moment (Read et al., 2011). However, interactions that do not become embodied in actual commitments carry vital information about the survival of the new market (Sarasvathy, 2008). Hence, entrepreneurs build knowledge corridors by learning what works and what does not work as they try to gain commitment from different stakeholders (Read et al., 2011). Initially, every stakeholder interaction is as likely to change the shape of the new market being created, as it is to change the original set of means (Read et al., 2011).

This part of the literature on the process model can be translated into the following heuristics:

- 7) *Make a priority list of stakeholders you know and who are worth interacting or co-creating with.*

Entrepreneurs have to consider if there is anyone in their environment they could potentially co-create a venture with. Within this, it is important for entrepreneurs to consider stakeholders who have complementary means (Read et al., 2009b) and who might be prepared to share risk with them (Read et al., 2011). Hence, entrepreneurs have to make a priority list of potential stakeholders; people they know who are worth interacting with. During the process, entrepreneurs should remain flexible since new (potential) stakeholders might come across the venture creation process.

- 8) *Interact with potential stakeholders and pitch your effectual business plan in order to communicate what it may take to co-create value for everyone involved.* Entrepreneurs should interact with the potential stakeholder in order to pitch their effectual business plan and to explain what it may take to co-create value for everyone who is involved. This pitch should be understandable for the potential stakeholder and entrepreneurs should tell an appealing and

inspiring story (Blekman, 2011). Besides, entrepreneurs should remain open to the ideas of the stakeholder (Blekman, 2011). If the situation allows it, entrepreneurs can ask the potential stakeholders what would motivate them to join the venture creation process and what effects they want to create when having a stake in the venture (Read et al., 2011).

2.2.5. STAKEHOLDER COMMITMENT

While entrepreneurs may be able to generate many ideas, what separates ideas from good ideas is whether key stakeholders are willing to make a commitment to them (Read et al., 2011). Effectual entrepreneurs focus their attention on building partnerships in order to reduce or eliminate uncertainty in the environment, to share risk, to generate control over the situation, to create new possibilities and to reduce the resources they need (Read et al., 2011; Sarasvathy, 2008). In an effectual partnership what matters is that both parties find something in it for them (Read et al., 2011) and that both parties understand what matters to the other (Read & Sarasvathy, 2005). An important note here is that entrepreneurs may build many relationships, but only those in which both parties share the risk of the venture and benefit from the success of its activities constitute effectual partnerships (Read et al., 2011).

The process of negotiating with potential stakeholders inverts conventional wisdom on bringing people on board of the venture (Sarasvathy & Dew, 2009). Entrepreneurs create the market or artifact by bringing together enough stakeholders who *buy into* the idea to sustain the enterprise (Sarasvathy, 2001; Sarasvathy & Kotha, 2001). To that end it is more a process of stakeholders self-selecting into the venture creation process (Dew et al., 2008) rather than entrepreneurs chasing for the right people and trying to sell the stakeholder a preconceived vision of the opportunity (Sarasvathy & Dew, 2009). Hence, what distinguishes effectual partnerships from causal partnerships is the belief that those who choose to join the venture, those who self-select into it,

ultimately make the venture what it is (Read et al., 2011). This is in sharp contrast to selecting partners to fit a given goal.

In this phase of the process, what counts is the preparedness of stakeholders to commit to the venture *creation* process, not their fit with or alignment to a preconceived vision or opportunity (Read et al., 2011). Thereafter, the content of the negotiation with potential stakeholders consists of what each is willing to commit (means) and why (motives). Since the market is still not quite made, these stakeholders also make commitments in the face of unpredictable consequences, so it makes sense to them to invest only what they can afford to and are willing to lose (Dew et al., 2008; Read et al., 2011; Sarasvathy & Dew, 2009). Entrepreneurs might also consider possible ways of investment and generating cash during the negotiations with stakeholders in order to lower the cash based entry barrier (Read et al., 2011). This might, for example, mean that entrepreneurs negotiate with suppliers about delayed payments terms or paying them in direct services. Also working with customers who are turned into strategic partners is a popular method of developing a market (Dew et al., 2011).

At some point in the process of negotiating for commitment, the question of *dividing the pie* or determining each stakeholder's share in the outcomes of the enterprise will arise (Sarasvathy, 2008). What makes the network effectual is the fact that the involved stakeholders are negotiating not for the size of their piece of the pie but for the shape, content and flavor of the pie since they cannot predict what it will eventually turn out to be (Dew et al., 2008; Sarasvathy, 2008; Sarasvathy & Dew, 2003). This is also the case when considering the conditions of *ownership and control* within the network of commitments (Read et al., 2011). Since effectuation focuses on creating ventures in an unpredictable situation, ownership gives entrepreneurs control over all the things that cannot be predicted upfront and, therefore, cannot be contracted for in any reasonable detail (Read et al., 2011). Entrepreneurs and their stakeholders should negotiate and match terms (i.e. decision rights, asset distribution after liquidity, and specification where to raise subsequent funding) to the different kinds

of relationships and objectives in order to create partnerships that are low on friction (Read et al., 2011).

When the stakeholder is actually committing to the venture idea, a chain of means and goals available to the entrepreneur begins to form (Dew et al., 2008). These are dependent on what the stakeholders are willing to commit and what they negotiate in return for their commitment (Dew et al., 2008). Assuming that this chain grows unbroken for a meaningful period of time, two cycles of consequences are set in motion:

- *Expanding the cycle of resources with new means.* The process of negotiation and commitment with stakeholders has the effect that with each new stakeholder commitment (partner), the original means and resources of the venture increase (Sarasvathy & Dew, 2009; Read et al., 2011). This means that the dynamics of the new venture creation process are contingent on interactions with stakeholders who are willing to contribute to the development of a new market or artifact (Read et al., 2011). To that end, the particulars of who they are, what they know, and whom they know drive the creation of the venture (Sarasvathy & Dew, 2003). This implies that the combination of these means contributes to novelty and the creation of a competitive advantage (Sarasvathy, 2008). With the new means that are added to the pool of resources, a new cycle of the process of effectuation will be started (Read et al., 2011).
- *Converging the cycle of constraints on goals.* Each committed stakeholder gets the chance to (re)shape the goals of the venture and to make a worthwhile contribution to the transformation and co-creation of extant realities into a new venture (Sarasvathy, 2008; Wiltbank et al., 2006). With doing this, they also bring a set of constraints on the choice set available from then on (Sarasvathy & Dew, 2003) and thus on how the venture (market) can be transformed (Sarasvathy, 2008). This means that the process of negotiation and commitment with stakeholders makes that the goals of the venture crystallize and become

increasingly hard to change during the process (Sarasvathy, 2008; Read et al., 2011). This process helps to converge towards something specific (Dew et al., 2008), which may or may not be what the entrepreneur had in mind at the beginning (Read et al., 2011).

The following heuristics apply to this part of the process:

- 9) *Be open towards stakeholders who are potential contributors to the process and who self-select into the venture creation process.* Entrepreneurs should be open towards self-selected stakeholders who are potential contributors to the process (Wiltbank et al., 2009) and who buy into the idea to sustain the venture (Sarasvathy, 2001; Sarasvathy & Kotha, 2001). Moreover, entrepreneurs should not try to sell stakeholders a preconceived vision of the opportunity but should let stakeholders self-select into the process of new venture creation (Sarasvathy, 2001; Sarasvathy & Dew, 2005).

- 10) *Consider and negotiate creative ways of investment and generating cash with the potential stakeholder.* While interacting and negotiating with stakeholders, it is important for entrepreneurs to consider creative ways of investment and generating cash with the stakeholders in order to lower the cash based entry barrier. Options entrepreneurs can think of are:
 - Negotiating with *suppliers* about delayed payment terms, payments as a percentage of revenue, direct capital investment, making them customer by paying them in direct services, using their slack resources, and getting them to guarantee a line of credit (Read et al., 2011).
 - Negotiating with *customers* about things like paying first purchase order (PO) in cash upfront for better pricing, getting a solid PO and then connect a lender that will accept that as collateral, using their commercial bank and lean on their line of credit (slack resources), and pre-selling them the first year's worth of their purchases (Read et al., 2011).

- Negotiating with *investors* about borrowing money from them instead of just taking the investment, paying them back as a variable cost against a percentage of revenue instead of against time, getting them to guarantee a line of credit, and taking investments but negotiating for a claw back which means that entrepreneurs can earn back their ownership if things go well (Read et al., 2011).
- Negotiating with *employees* about, for example, giving them options rather than cash, and a percentage of sales rather than base salary (Read et al., 2011).

11) *Consider and negotiate the actual terms and conditions (how to ‘divide the pie’ and ‘control and ownership’ issues) with the stakeholder.* At this stage of the process it is important for entrepreneurs to negotiate the terms and conditions of the potential partnership with the stakeholders in order to become more specific for actually committing them to the venture creation process. The content of such negotiations with potential stakeholders is i.e. what means and resources each is willing to commit and what their motives are. Furthermore, entrepreneurs should discuss and negotiate *how to divide the pie* with the stakeholders. This discussion should primarily focus on the content and shape of the pie rather than its size and subdivision (Sarasvathy, 2008). In the same way, the issue of *control and ownership* should be considered.

2.2.6. CHANGES IN THE ENVIRONMENT (LEVERAGING CONTINGENCIES)

The rather traditional entrepreneurship models, like causation, propose that entrepreneurs should do fairly extensive planning in order to reach the preset goals that they have envisioned when venturing into a new business (Read et al., 2011). While there are benefits of these activities, Sarasvathy (2001; 2008) comments that these pre-made plans tend to restrict flexibility on behalf of the entrepreneur who in turn seeks to avoid surprises. By viewing every surprise as being problematic, entrepreneurs tend to miss out on the upside opportunity that surprises – even negative ones – potentially entail (Read et al., 2011). The effectual logic suggests that entrepreneurs should leverage contingencies, which entails embracing unexpected events and turning them into profitable

opportunities. In such way, entrepreneurs generate unanticipated outcomes as opposed to achieving predefined goals (Fisher, 2012).

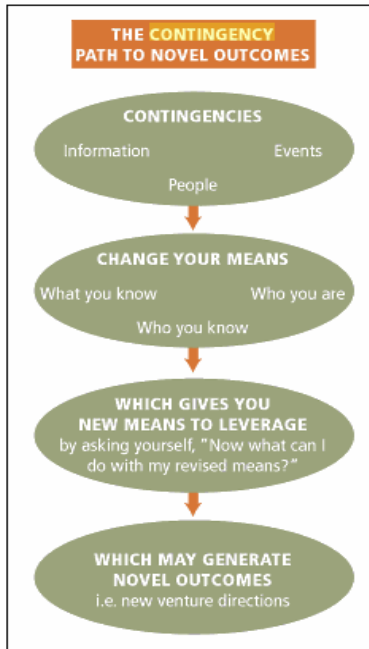
Instead of looking at surprises as being problematic for the venture creation process, it can be seen as a resource or a building block for a new venture (Read et al., 2011). At the start of every new venture creation process, effectual entrepreneurs know some of the building blocks (Sarasvathy, 2008). Often, they begin with only a very loose notion of their goals, and set plans in an incremental way while using uncertainty and contingencies as resources for their goals rather than relying on goals as determining factor of resource acquisition and choice (Sarasvathy, 2008). Therefore, effectual entrepreneurs accumulate and take advantage of path dependencies in the courses of action they choose (Sarasvathy, 2008).

Along this line of reasoning, the unexpected event does not represent a loss of control over the situation but can be seen as an opportunity to exercise control of an emerging situation by pointing it in a new direction (Sarasvathy, 2008). Being flexible and embracing surprises that come along gives entrepreneurs more control in an uncertain environment than trying to follow a pre-determined plan (Read et al., 2011). Entrepreneurs cannot predict and design surprises, but they can try to exploit them by incorporating them and rebuilding the venture around them as they go along (Read et al., 2011). Therefore, entrepreneurs in the effectual process deliberately keep open room for surprises (Wiltbank et al., 2006).

It is important to realize that contingencies themselves do not automatically shape the future direction of the venture (Read et al., 2011). Effectual logic suggests that contingencies may be the source of opportunities for value creation, but only if someone seizes upon them in an instrumental fashion and imaginatively combines them with extant inputs to create new possibilities (Sarasvathy, 2008). What is important in this is the entrepreneur's willingness to change when confronted with new information, means or surprises (Read et al., 2009b).

The process of leveraging contingencies can be simplified into the contingency process diagram, as illustrated in Figure 3.

Figure 3. Contingency leveraging process diagram of effectuation



Source: Read et al. (2011)

- The trigger for the process to begin is the contingency that occurs. This could be people, meetings, events or information that arrives on the entrepreneur's doorstep. Any changes in the environment can provide the entrepreneur with new means and kick start the effectuation cycle again (Read et al., 2011).
- The second element concerns seeing that a contingency usually alters the entrepreneur's means (Read et al., 2011). The contingencies tend to incrementally change those means; e.g. meeting someone changes 'who they know' and new information changes 'what they know'.
- The third element in the contingency leveraging process concerns forming a possible action in response (Read et al., 2011). The challenge is to do something creative with the contingencies. In general, there are two keys to being more creative when solving problems. First of all, the more potential solutions entrepreneurs consider, the more likely they are to provide creative solutions to a given problem they face. Secondly, the general rule for improving creative problem solving is changing the way the problem is framed; instead of looking at it as a problem, entrepreneurs should look at it as an opportunity (Read et al., 2011).
- The final element is the novel outcome that may be generated. Read et al. (2011) argue that the real source of value in contingencies is the novelty of the responses that entrepreneurs sometimes concoct when faced with them.

The following heuristics can be regarded as operationalization of above literature:

- 12) *Improve the chances that leverable contingencies happen to you.* Entrepreneurs can improve the chances that leverable contingencies happen to them (Read et al., 2011). First of all, they can do this by deliberately engaging in networking behaviors, since information often arrives through others in their network (Read et al., 2011). Secondly, entrepreneurs can increase their exposure to contingencies by being intellectually curious and seeking new experiences in order to deliberately cultivate their own taste for new things. These behaviors may make entrepreneurs more receptive to contingent events and information and in turn more likely to view these events as upside opportunities.

- 13) *Transform the unexpected in opportunities in order to benefit from these surprises.* Read et al. (2011) give entrepreneurs the advice not to look at surprises from the perspective of how they upset the existing plans, but how they can shift actions so that they will be the beneficiary of a surprise. This means that entrepreneurs should rather focus on opportunities than constraints. One tool that entrepreneurs can use is imaginative re-thinking of possibilities in order to transform the unexpected into new opportunities and courses of action (Read et al., 2009b).

- 14) *Try to exploit contingencies by incorporating them in the venture creation process.* Entrepreneurs should allow the business to evolve as opportunities emerge (Chandler et al., 2007, 2011) and should try to exploit contingencies by incorporating them and rebuilding the venture around them as they go along (Read et al., 2011). This means that entrepreneurs should consider how the contingencies alter their own means, what constraints they bring and how they change the goals. Therefore, entrepreneurs run through an additional iteration of the effectual process model when incorporating contingencies in the process.

2.2.7. NEW FIRMS, NEW PRODUCTS AND NEW MARKETS

As the effectual network grows over time and includes more and more of the external world (Sarasvathy, 2008), the converging cycle of constraints will finally end the stakeholder acquisition process; there is no more room for negotiating and maneuvering the shape of what will be created (Read et al., 2011). In sum, this means that when the membership increases there is less room for transformational negotiations with newcomers and eventually the network reaches a point where new members have to take most of the artifact as they find it (Sarasvathy, 2008). Thereby, the goals of the venture created are the combined result of the imagination and aspirations of the entrepreneurs and stakeholders (Read et al., 2011; Sarasvathy, 2008) which in turn makes that the venture embodies a variety of ingredients from stakeholders (Dew et al., 2011). The venture that gets created can be seen as the residual of a process of constructing a network of partnerships, using contingencies that get thrown across the development path (Sarasvathy & Kotha, 2001). As the structures of the venture begin to take visible shape, it becomes important to re-evaluate the balance of prediction and control in the venture's strategies (Read et al., 2011).

2.3. OVERVIEW OF THE EFFECTUAL HEURISTICS

Table 2. A list of the effectual heuristics underlying the process model of effectuation.

Step	Nr.	Heuristic
Available means	1	Make an inventory of your readily available means, <i>who I am, what I know & whom I know</i> , and include all the new means that become available during the process in your pool of resources (Read et al., 2011; Sarasvathy, 2001).
	2	Continuously look around for <i>slack resources</i> that are left over from other uses or simply lying around because nobody had paid any attention to them (Read et al., 2011).
Goals. What can I do?	3	Consider what could possibly be done with the readily available means and resources (Chandler et al., 2007; Read et al., 2011). Imagine possible courses of action and experiment with different ways, e.g. distribution channels and revenue models, that can lead to commercial offerings (Chandler et al., 2011).
	4	Decide how much is really needed for starting these courses of action. In order to commit only limited amounts of resources to the venture, seek out creative ways of doing things in inexpensive ways (Read et al., 2011).
	5	Decide what you are maximally able and willing to lose in the worst-case scenario and what you minimally want to earn with the course of action (Chandler et al., 2011; Dew et al., 2009).

	6	Consider which imagined end you feel comfortable with taking even if you lose all the investment. Start with those actions over which you have the greatest degree of control and avoid courses of action that restrict flexibility and adaptability (Chandler et al., 2007; Read et al., 2011).
Interact with people you know	7	Make a priority list of stakeholders you know and who are worth interacting or co-creating with. Remain flexible and update this list during the process (Read et al., 2011).
	8	Interact with potential stakeholders and pitch your effectual business plan in order to communicate what it may take to co-create value for everyone involved. Be open towards the input of the discussion partner and ask the stakeholder what would convince him/her to come on board (Read et al., 2011).
Stakeholder commitment	9	Be open towards self-selected stakeholders, who are potential contributors to the process (Wiltbank et al., 2009). Do not try to sell the stakeholder a preconceived vision of the opportunity, but let the stakeholder self-select into the venture creation process (Sarasvathy, 2001).
	10	Consider and negotiate creative ways of investment and generating cash with the potential stakeholder in order to lower the cash based entry barrier. Make pre-commitments with suppliers, customers, employees, investors and other organizations (Read et al., 2011).
	11	Become more specific and negotiate the terms and conditions (<i>how to divide the pie & control and ownership issues</i>) with the stakeholder in order to transform pre-commitment into an effectual partnership. Also define what each is committing to the venture creation process (Sarasvathy, 2008).
Changes in the environment. Leveraging contingencies	12	Improve the chances that leverable contingencies happen to you by deliberately engaging in social networking behaviors, by being open to experience and transformation, and by deliberately cultivating your own taste for new things (Read et al., 2011).
	13	Transform the unexpected in opportunities in order to benefit from these surprises (Chandler et al., 2011). Respond to unplanned opportunities as they arise by looking how they can shift actions so that you are the beneficiary of a surprise (Read et al., 2011).
	14	Allow the business to evolve as opportunities emerge (Chandler et al., 2007) and try to exploit contingencies by incorporating them in the process and rebuilding the venture around them as they go along (Read et al., 2011).

2.4. EXPECTED DIFFERENCES BETWEEN EXPERT AND NOVICE ENTREPRENEURS

There are some differences between expert and novice entrepreneurs that are important to note since they may require changes to the current process model and theory of effectuation. One of these differences relates to the fact that entrepreneurship is seen as a form of expertise – a set of skills, models and processes that can be acquired with time and experience (Read & Sarasvathy, 2005). Expertise is developed through a specific type of experience that involves *deliberate practice* (Read

& Sarasvathy, 2005), which means that experts learn by doing and in that way develop their volume of knowledge over time. From deliberate practice, experts have a larger mental database of actual experience (Dew et al., 2009a) and more extensive knowledge assets to apply to a problem than novice entrepreneurs (Read & Sarasvathy, 2005). They intuitively draw from these past experiences when facing problems (Read & Sarasvathy, 2005). Hence, expert entrepreneurs confirm by experience what seems reasonable, what is doable and to them worth doing (Sarasvathy, 2008). Since novice entrepreneurs do not have prior business ownership experience, they do not have the experience it takes to make sound, intuitive decisions (Dreyfus & Dreyfus, 1986; Gustafsson, 2004). This means that novice entrepreneurs may face certain challenges when attempting to apply effectuation principles. For example, it might be more difficult for them to assess what could be done with their own particular means.

Another difference is that prior business ownership experience may provide expert entrepreneurs with a variety of assets, such as a network of social and business contacts that may be used in subsequent ventures (Westhead et al., 2005). Over time, entrepreneurs accumulate social capital – the contacts that lead to contributing to their entrepreneurial goals – which is regarded crucial for starting a new venture (Greve & Salaff, 2003). Novice entrepreneurs can be expected to have a more limited network compared to their expert counterparts, which might restrict the amount of available information, resources and ideas a novice entrepreneur can start with or accumulate. This might restrict the development of the new venture creation process.

Yet another difference is that experts frame problems in such a way that they build contingency into their strategy, whilst novices may be less willing and able to do so (Read & Sarasvathy, 2005; Westhead et al., 2005). This might become problematic for the integration of contingencies in the venture creation process of the novice entrepreneurs. These examples of differences between experts and novices suggest that it is not clear yet whether and how novice entrepreneurs can use effectuation as a method for new venture creation.

3. METHODOLOGY

3.1. RESEARCH SETTING AND GENERAL APPROACH

As already explained, this *action research* study focuses on real-time data concerning new venture creation. Together with my student colleague, I have engaged in the creation of my first real-life venture and tried out in practice to what extent I could base these actions on the heuristics underlying the process model of effectuation. This means that we both performed the role of researcher and novice entrepreneur simultaneously. From a research perspective, we were suitable as novice entrepreneurs for this study because we both had not created a venture before, and we were both exposed to the effectual logic during the Master track that we follow. The new venture creation process started with our aspiration to become an entrepreneur in the hospitality industry. Although we knew within which industry we wanted to be active, we were still open for all types of venture ideas, as long as these were novel. Since outcomes of novelty are by definition unpredictable and uncertain (Sarasvathy, 2008), this situation can be regarded as appropriate for a study concerning effectuation. From that point in the process on, we have both followed the new venture creation process during a period of 7 months. This period of time was not definite at the start of the study, but turned out to be the time that we needed to get our venture up and running. During this process, we deliberately applied the heuristics underlying the process model of effectuation and reflected on the interesting and remarkable insights and problems that we faced.

Action research is structured along an iterative cyclical process of diagnosis, action planning, intervention, evaluation and reflection (Coughlan & Coughlan, 2002; Davison et al., 2004). The cyclical nature of action research facilitates learning from experience through a series of reflective stages, meaning that the experience of the previous iterations enables researchers to be flexible and to improve effectiveness of the interventions by refining the research design (Coughlan & Coughlan, 2002). Moreover, with each iteration of the action research process, researchers test their own

assumptions by subjecting these to *public* testing (Coughlan & Coughlan, 2002). These conditions offer researchers a gradual and emergent approach to problem solving. In each action research cycle, the five phases are implemented as follows:

- *Diagnosing*. In the diagnosing phases, I focused on identifying the current situation (problem) of the study and making the purpose and direction of the particular moment clear. This means that I have looked at the heuristics of the effectual process model and decided where the focus would be on. At the very start of the process, I focused on all the heuristics. However, after a few cycles, some parts of the model became clearer and I could focus my attention on the parts that I wanted to gain extra insight on.
- *Action planning*. In each action planning phase I made a plan which included the goal of the intervention, which were meetings with potential stakeholders. Hence, in this phase I prepared these meetings, together with my student colleague, and decided on the strategy that I wanted to employ in order to make sure to collect all the necessary information for studying the behaviors and heuristics on which I planned to gain insights.
- *Intervention*. During the intervention phases we executed the action plan together, and interacted with the potential stakeholders in order to observe their behavior regarding the effectual heuristics. From a research perspective, the goal of these meetings was to gather qualitative data on the extent to which we could use the effectual process during new venture creation, when considering the preferences, demands, wishes and reactions of these stakeholders. Moreover, I also focused on my own perception of and feelings about the effectual heuristics in practice. All of this is recorded in memos. Memoing was used as individual method for collecting data during the rapid flow of activities within this study. These memos were further worked out and elaborated in an individual research diary, which we both kept. Details about this data collection method are explained in Chapter 3.2.

- *Evaluation.* After the interventions and other unplanned events were recorded in the research diary we both individually coded the interesting and useful fragments of both the research diaries into a coding scheme, while focusing on the applicability of the process model for novice entrepreneurs. This process of coding is explained in Chapter 3.3. In the evaluation phases, I also compared the outcomes with the goals of the action plan which were formulated before.
- *Reflection.* In the reflection phases I have analyzed whether the interventions and actions had generated relevant theoretical and practical insights. Together with my student colleague, I reflected on the plan of approach and considered to what extent it was suitable or needed adaptations for the remaining time in order to improve effectiveness of the interventions. During the reflection phase, I also decided whether or not to proceed through an additional cycle.

It is important to remark that it is not possible to describe each action research cycle in detail in advance. The first cycle will end with an evaluation and reflection phase, which will subsequently facilitate planning the next action research cycle. During the evaluation and reflection phases researchers generally learn of the experience of the cycle they passed, which will enable them to adjust new insights, to test assumptions and to improve effectiveness of the interventions, thus to plan the next cycle (Coughlan & Coughlan, 2002).

3.2 DATA COLLECTION: MEMOS AND DIARIES

Memoing was used as method to collect data on the quickly flowing practical activities (Altrichter & Holly, 2005; Babbie, 2010) throughout the effectual process and particularly during the meetings with potential stakeholders. Memoing is a flexible strategy wherein the process of construction and nature of content is determined by the focus of the researchers and the aim of the research study (Birks et al., 2008). Therefore, the individual memos of both researcher-entrepreneurs

included both empirical observations (know) and personal interpretations (think). I experienced that it was vital to make accurate notes of everything that was discussed during the meetings and of all the things that appeared during the execution of the process, and to work them out in more detail as soon as possible after the activities.

In order to systematically order these memos, we have both recorded all information in an individual electronic research diary, which functioned as a self-report instrument used repeatedly to capture ongoing experiences and events (Bolger et al., 2003; Coughlan & Coughlan, 2002). Altrichter & Holly (2005) comment that qualitative research can make intensive use of a research diary since it can build up thorough insights concerning the researched issue. Another advantage of research diaries is that they reduce the likelihood of retrospection, achieved by minimizing the amount of time elapsed between an experience and the recording of this experience. Moreover, diary research is particularly suitable for the cyclical nature of data gathering that came with the action research design (Bolger et al., 2003).

An event-based design is used as format for the research diary (Bolger et al., 2003). This means that each iteration of the process model of effectuation that the researcher-entrepreneurs ran through was recorded as one *event* and thus one entry in the research diary. Subsequently, one iteration of the process model corresponds with one action research cycle, which suggests that one event is also one action research cycle. Within each iteration, descriptive and interpretive data on all the remarkable insights that appeared during the meetings were recorded in the individual research diaries. Also own experiences, feelings, and behaviors concerning effectuation were recorded. In order to obtain reliable and valid data, diary studies require a high level of participant commitment that is rarely required in other types of research studies (Bolger et al., 2003). Whereas attaining such high commitment is normally seen as quite challenging, the action research design of this study and the dual role of both the researcher-entrepreneurs, led to strong commitment in this study. This process resulted in 15 events (meetings) and thereby 15 separate entries in both research diaries. In

order to increase the reliability, we both kept an individual research diary that was not shared initially. This resulted in 30 research diaries in total, comprising 220 pages of typed text, which could be used for the analysis.

3.3 DATA ANALYSIS AND CODING

In order to transform the data of the research diaries into a standardized form of data that was more suitable for analysis, they were coded using thematic analysis. Thematic analysis is a process of making sense of data by encoding qualitative data in common themes or categories (Boyatzis, 1998). In this study, these categories are based on the underlying heuristics of the process model of effectuation, as displayed in Table 2. I have developed a coding scheme for these categories in order to structure all the fragments of the research diaries that contained relevant information or insight into the specific categories. In order to capture the iterative process of action research, I have divided all 14 categories (heuristics) in the coding scheme into 15 rows (cycles), in order to be able to express what happened over time. To increase the reliability of the research, both researcher-entrepreneurs individually extracted the relevant fragments of the 30 individual research diaries and recorded those in the coding scheme. The resulting coding scheme contains over 1200 single fragments of both researchers.

As both researcher-entrepreneurs coded both research diaries there were two databases to draw from which made it possible to assess the reliability of the analysis. Inter rater reliability (IRR) is a measure of consistency that assesses the agreement of observations made by two or more raters and is important when a measure is subjectively scored and judgment is involved with biases of the researcher (Jackson, 2012), as is the case with this study. Estimating inter rater reliability can be done with the following formula: *Number of agreements / number of possible agreements x 100%* (Jackson, 2012). However, what researchers need is an approach to measure agreement beyond chance (Gwet, 2001). To address this problem Cohen (1960) introduced a chance corrected measure

of inter rater reliability; the Kappa coefficient. This is a measure of the level of agreement after chance agreement is removed from consideration (Gwet, 2001). In order to have sufficient data for calculating the inter rater reliability and to keep track of the reliability throughout the process, I have calculated Cohen's Kappa after each three action research cycles. In order to get further insight into the reliability of the heuristics, I have also calculated Kappa for each of them separately. Based on a threshold for reliability of .70 (Jackson, 2012), I can conclude that the coding and analysis of this study were reliable, as is shown in Table 3.

Table 3. Overview of the Kappa's belonging to the cycle clusters and effectual heuristics

Cycles	Kappa
1 – 3	0,840
4 – 6	0,800
7 – 9	0,808
10 – 12	0,744
13 – 15	0,783
<i>Overall cycles:</i>	<i>0,801</i>
Heuristic	
1. Make an inventory of your readily available means.	0,858
2. Continuously look around for slack resources.	0,834
3. Consider what you could possible do with the readily available means and resources and imagine possible courses of action.	0,856
4. Decide how much you really need to start these courses of action.	0,858
5. Decide what you are maximally able and willing to lose and what you minimally want to earn.	0,879
6. Consider which imagined end you feel comfortable with and select the most interesting course of action.	0,777
7. Make a priority list of stakeholders you know who are worth interacting or co-creating with.	0,836
8. Interact with potential stakeholders and pitch your effectual business plan in order to communicate what it may take to co-create value for everyone involved.	0,803
9. Be open towards stakeholders who are potential contributors to the process and who self-select into the process.	0,860
10. Consider and negotiate creative ways of investment and generating cash with the potential stakeholder.	0,778

11. Consider and negotiate the actual terms and conditions (how to <i>divide the pie</i> and <i>control and ownership</i> issues) with the stakeholder.	0,777
12. Improve the chances that leverable contingencies happen to you.	0,753
13. Transform the unexpected in opportunities in order to benefit from these surprises.	0,768
14. Try to exploit contingencies by incorporating them in the process and rebuilding the venture around them as they go along.	0,762
<i>Overall heuristics:</i>	<i>0,814</i>

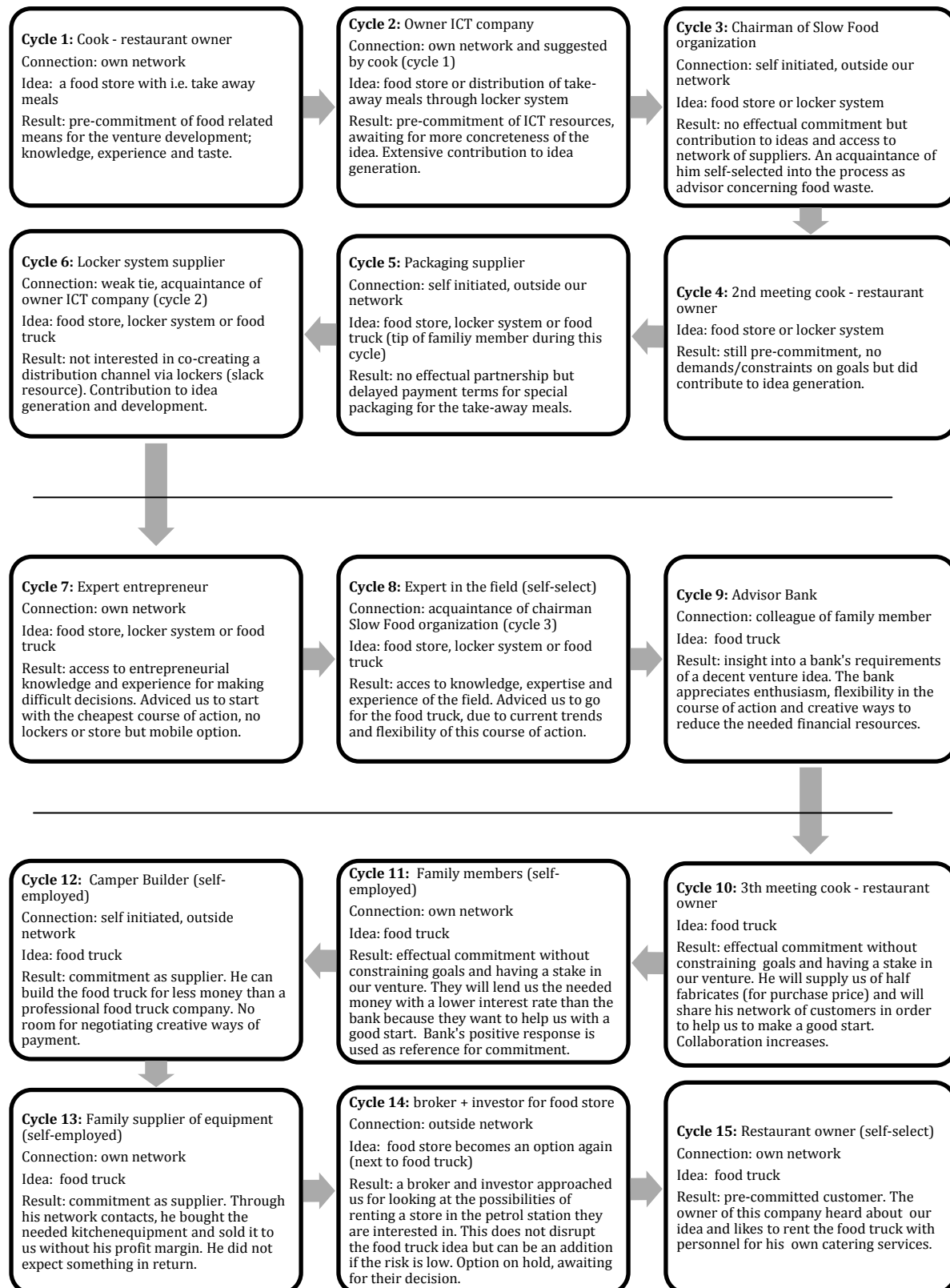
4. RESULTS

The analysis of the data reveals interesting new findings into the relevance and suitability of the effectual process as entrepreneurial method for novice entrepreneurs. In this chapter, these findings are discussed by first describing the venture creation process in general and then concentrating on particular insights concerning the process model of effectuation. For reasons of simplicity I will continue to use the term *we* throughout the results section.

4.1. THE VENTURE CREATION PROCESS OF THE FABULOUS FOOD TRUCK

In our close environment there was a small food store, Neighbourfood, which was situated in a well established city district. This store sold i.e. take-away meals that were healthy and tasteful. After a few successful years, the store closed due to private circumstances of the owner. This closure triggered us to think about starting our own venture in this industry, since we were very charmed by the concept of Neighbourfood. Whereas we had thought about some options, like distributing healthy food through a store or mobile concept, we decided to keep this idea open and to start our venture in an effectual way. With this starting point we engaged in interactions with a total of 15 potential stakeholders during the next 7 months. These 15 cycles of meetings and interactions with potential stakeholders are visualized and summarized in Figure 3.

Figure 3. Overview of the new venture creation process of the Fabulous Food Truck



After 15 cycles, the effectual venture creation process moved from an initial idea for a food store, which turned out to be inflexible and expensive, via the idea of distributing take-away meals through existing lockers, which was rather expensive and difficult to put in practice, to the final venture concept ‘Fabulous Food Truck’. This is a mobile restaurant which is very flexible and adaptable, relatively inexpensive and highly supported by the stakeholders and people in our environment. At the time of writing this Master Thesis, the Fabulous Food Truck is ready for take-off and the first customer orders have been placed.

4.2. THE EFFECTUAL PROCESS: DIVERGENCE, CONVERGENCE AND EXPLOITATION OF IDEAS

It is common in the entrepreneurship literature to distinguish explicitly between processes of opportunity discovery, evaluation, and exploitation (Shane & Venkataraman, 2000; Davidsson, 2005). In contrast, effectuation theory does not distinguish them and rather considers them as an integral part of each iteration of the entire new venture creation process (Sarasvathy, 2001; 2008). When deliberately employing the process model of effectuation, though, we found that we could not run through the current model solely, but we observed that we went through three rather distinct phases in the new venture creation process in which effectuation was used differently. The first phase (cycle 1–6) focused on idea generation and exploring courses of action that could possibly be put in practice. This resulted in divergence of goals. The second phase (cycle 7-9) was more related to investigating and testing the courses of action that we came up with during the first phase, and moving towards convergence of ideas. The third phase (cycle 10-15) focused on gathering the remaining resources in a creative way in order to exploit the chosen idea and putting it in practice.

Phase 1: Divergence of possible courses of action. During the first cycles, we experienced that the focus was on exploring ideas within the direction that was chosen, the hospitality industry. As one of us remarked in the diary: *“In the first cycles it was important to expand our network in order to come across new insights to develop the initial ideas”* (Cycle (C)6). What we noticed was

that potential stakeholders were focusing on contributing to idea generation and committing relatively inexpensive resources such as information, network contacts and insights in order to help us with the development of possible courses of action. An example are two meetings with experts in the field, who both did not see a role for their company to participate in the venture creation process, but were willing to contribute to idea development: *“It really seemed that the stakeholder saw himself as mediator between us and the suppliers of Slow Food. He gave us many ideas and contacts”* (C3) and: *“Although he noticed that there was maybe not an extensive role for his company, he was prepared to think about other options with us”* (C6). In addition, other stakeholders contributed to the process by inspiring us with their ideas and insights: *“The meeting focused on concept development and idea generation and not on concrete commitment and terms and conditions”* (C1), and: *“I hope you have enough inspiration now to develop the venture concept and to make something workable of it. If you have a more concrete picture of the venture, then contact me if you need someone of my network”* (C2). We noticed that every interaction with people we knew resulted in more insights, goals and resources: *“Speaking with another stakeholder results apparently in new insights, new ideas, so in new imagined ends”* (C2). Subsequently, this resulted in a few possible courses of action that we wanted to find out more about. The focus of stakeholders was not on initiating an effectual partnership and constraining goals, but on interacting for relatively inexpensive means and goals, or initiating a pre-commitment while waiting for more concreteness.

Phase 2: Convergence of courses of action and the plunge decision. People around us were motivating and expecting us to take action and start our venture. For instance, an expert of the field advised us to take action: *“Start small with what you can do already. Just buy a ... and sell the products next to busy roads. Just try something and take action”* (C6). However, we observed that we were looking for some extra support and underpinning of the possible courses of action. We were especially looking for experts in our network who could give us access to knowledge and information: *“In the last cycles it becomes more and more important to get some useful knowledge*

and access to expert experience. This in order to be able to make a decent decision about which option to choose” (C7) and: “We have more insight in the various ‘imagined ends’ now” (C7) and: “Considering the venture concept, we can see this meeting as a sort of ‘feedback’ moment in which someone gives us feedback about our current venture concept and the feasibility and possibilities” (C6). Moreover, within this phase we were looking for expert experience and advice about the courses of action. As one of us remarked in the diary: “We really like to talk to an experienced entrepreneur in order to find out what he would do in our case. It feels comfortable to ‘test’ the options and to gain further insight into the venture concept by talking to an experienced person” (C7), and: “We would like to ‘test’ our effectual business plan and get feedback on it from an experienced account manager of the bank” (C9). Along this line, we even noticed that it was highly valued by stakeholders that we underpinned our venture concept with the ideas and trust of people in our environment. For example, one of us wrote: “A very important aspect was that we explained that we talked to a lot of people in order to develop the effectual business plan. The stakeholder seemed to appreciate this strategy because that makes the final plan well-underpinned, not really with estimations of the future but with the ideas, trust and enthusiasm of people in and outside the industry and in our own environment” (C9).

In short, the focus was not on generating ideas for new courses of action – as in the first phase – but on taking a well-considered plunge decision. We converged towards concreteness about the courses of action: “As we move further in the effectual process, the goal becomes more concrete and clear. Every stakeholder had influence on this and that resulted in the effectual business plan that we have at the moment” (C10). Within this, the stakeholders did not constrain the goals, but gave feedback on them. Thereby, this phase can be seen as the turnaround point in which we moved from divergence of courses of action to convergence and more concreteness about the course of action which we decided to exploit. For us this resulted in the decision to go for the food truck. This phase of the process model may be especially applicable for novice entrepreneurs since they do not have

prior business ownership experience to draw from in making sound intuitive decisions when facing problems like this.

Phase 3: Exploitation of the chosen course of action. After deciding to go for the food truck, the interactions with stakeholders did not focus on exploration anymore. This appears in the following fragment: *“We are more and more convinced that the chosen idea is the best first option to execute. Therefore, conversations with new people don’t have the same effect on new possible courses of action”* (C12). However, we were still flexible regarding the exact interpretation of it: *“I notice that once I made the choice for the Food Truck, I go for it and I am not prepared to change the whole idea. I am open for ideas about possible business activities that we can execute with the Food Truck”* (C13) and: *“Although our broader concept is clear now, we are still flexible concerning the exact interpretation. This is dependent on all the information and ideas that we keep gathering. We are not the only ones with good ideas, so we are also flexible towards the good ideas of others”* (C13). Thereby, the possibilities that we considered in this phase were all within the bandwidth of the chosen course of action and did not disrupt the food truck idea but gave substance to it. For instance, in cycle 15 we interacted with a stakeholder who self-selected into the process as a pre-committed customer: *“This stakeholder came up with several interesting ideas concerning business activities that we can perform with the Food Truck. For instance, he proposed to rent our Food Truck for his own catering purposes”* (C15).

This phase turned out to be more ends-driven than the other two phases. We were interacting with people in our network in order to find potential stakeholders who might be able to commit remaining resources: *“In this stage of the effectual process, we were more looking for stakeholders who possess means that we don’t have, while we do need them for our venture goals”* (C10). However, we observed that we were still thinking effectually in order to exploit this course of action in a creative way. For instance, we committed a (financial) stakeholder: *“Since the stakeholder has a good (trust) and professional relationship with the bank, he can lend money for less interest than we*

would have to pay. *We can lend this money of him for the same interest rate that he has to pay*” (C11). Also, we transformed the pre-commitment of the cook in concrete commitment with a creative construction: *“We have committed this stakeholder on the basis of a partnership in which he delivers half-fabricates for purchase prices. This reduces the amount of money we would otherwise need to hire a cook, while it does bring us the needed resources”* (C10).

4.3. EASY TO EXPAND A LIMITED POOL OF RESOURCES THROUGH THE MEANS OF OTHERS

As explained in Chapter 2, it is expected that novice entrepreneurs have limited availability of assets, such as network and information, due to their lack of prior business experience. In turn, this might restrict the amount of resources and ideas novice entrepreneurs can start with or accumulate. As expected, at the start of the venture creation process our pool of resources was relatively limited. However, we have experienced that it was easy to expand, for example, a limited network by taking that network as a starting point: *“Interesting to see is that your limited network in the beginning can expand so quickly via people you know”* (C4). Besides, it appeared to be relatively easy to get access to the means of others in our network. They were all prepared and willing to help us with committing their unique means. This can be illustrated by the following fragment: *“Making use of our own network works well; they are willing to help us with their means and resources in order to make sure that we start off well”* (C13). Although we easily got access to the resources of others, we did prefer to stay close to ourselves in order to stay in control: *“We notice that we like to stay close to ourselves in order to ‘control’ the situation and our future... to prevent losing our strength and distinctiveness”* (C5). This result suggests that a limited pool of resources at the start of the venture creation process should not have to be a problem for (novice) entrepreneurs.

4.4. TRANSPARENCY IS NEEDED IN ORDER TO OBTAIN RESOURCES AND TO COMMIT STAKEHOLDERS

During the effectual process, we noticed that we had to be completely open about our ideas and imagined ends in order to convince stakeholders about the opportunities. In turn, this was necessary to gain advice and get commitment of resources. For example, this appears in the following fragment: *“To explain our ideas it was necessary that we pitched it as concrete as possible in order to make sure that the stakeholder could imagine what our plans are”* (C5) and: *“He expanded our means with his experience, advice and network”* (C3). In addition, talking openly and transparent about our imagined ends or venture concept towards the people in our environment resulted in unexpected and valuable insights: *“By explaining our idea broadly, we noticed that people responded with interesting suggestions, ideas and contacts in order to develop the venture concept”* (C1). Subsequently, this had influence on the number and type of imagined ends that we considered during the process: *“Speaking with another stakeholder results apparently in new insights and ideas, so in new imagined ends”* (C2). Interaction with others was key in generating new possible courses of action and we needed to speak openly about the plans to improve our chances to come across slack resources, contingencies and self-selected stakeholders. Without this openness, it was not possible for us to fully apply effectuation as a method. Although Chapter 2 points out that novice entrepreneurs are expected to come across difficulties with accumulating ideas and evaluating what could be done with their resources, this study shows that this was not a problem in practice. However, interacting and talking openly and transparent about our plans with others was vital in this process of generating possible imagined ends and improving the chances to come across slack resources, self-selected stakeholders and unexpected surprises. Hence, the findings suggest that talking openly and *transparent* might be a requisite for novice entrepreneurs.

4.5. WHAT IS AN AFFORDABLE LOSS DEPENDS ON THE CONCRETENESS OF THE IMAGINED ENDS

During the process, we experienced that it was hard to assess the possible courses of action on the basis of affordable loss when they were not quite concrete yet. Already within the first cycle we came across this difficulty: *“I think it is difficult to get started with evaluating the imagined ends on affordable loss. I think this is because the venture concept is not very concrete yet, which makes it hard to imagine or put on paper what concrete costs we have to make for each of them”* (C1) and: *“It felt like it is not really important for this moment to make sure what you would like to afford to lose, since the final idea isn’t clear”* (C1). We noticed that we were searching for some concreteness within the possible courses of action before applying affordable loss as evaluation method: *“We first want to get a better view of each course of action. So evaluating on affordable loss isn’t really applicable at this moment”* (C5). After a number of meetings with some potential stakeholders, the ideas became more concrete which seemed to make it more logical for us to assess what we really needed for these courses of action and what we were actually willing and able to afford to lose. This means that affordable loss, as an evaluation tool, became more important in the second phase of the process that was explained in 4.2. In the third phase of our venture creation process, affordable loss was rather used as means to seek out creative ways of doing things in inexpensive ways. The following fragments illustrates this: *“What we continuously do is looking for ways to reduce the resources we need and to look around us for opportunities in order to reduce the amount of resources and cash we need”* (C10) and: *“At this moment we are concentrating on looking what do we really need in order to reduce the needed cash”* (C12) and: *“Especially in the phase in which the venture concept is quite concrete, it is useful to think of the needed resources in creative ways”* (C13).

4.6. BEING CREATIVE ABOUT THE RESOURCES YOU REALLY NEED IN ORDER TO COMMIT STAKEHOLDERS

Along this line of reasoning, we also experienced that being creative about the things we really needed was important in order to convince and commit stakeholders. We noticed that it was truly valued by our stakeholders to have a mindset of looking at what you really need. For example: *“The stakeholder agreed that novice entrepreneurs, but actually every entrepreneur, have to be very critical about the resources he or she really needs”* (C2). In addition, our stakeholders highly appreciated being creative about the needed resources and stimulated us to think that way: *“Everybody, including this stakeholder, tells us to be creative regarding the resources we need and to look around us for opportunities in order to reduce the amount of resources and cash we need”* (C10). As an example of a creative way, one of the stakeholders mentioned that making use of existing resources could reduce the things entrepreneurs really need. The following fragment illustrates this: *“Use existing distribution channels and not try to realize a large channel yourself which is very expensive and hard to realize”* (C2). During the meeting with the bank account manager, we observed that they actually expect entrepreneurs to decrease the investment needs as much as possible: *“A bank likes the idea of reducing the needed resources for a starting business. Being creative in generating resources will reduce cash needs and increase the chance on success since your costs are lower”* (C9). Thus, within this study we found that being creative about the resources we really need does not only give control, as the affordable loss principle suggests, but also helps to obtain additional means and resources from stakeholders.

4.7. AFFORDABLE LOSS DOES NOT ALWAYS WORK SUFFICIENTLY; INCLUDE VERSATILITY

The effectual logic triggers entrepreneurs to think about imagined ends that they could possibly start with their own means and resources. However, we experienced that some interesting imagined ends required more than what we had in our pool of resources or could afford to lose. This

made us realize that what we could afford to lose, especially financial resources, was not enough as investment for the imagined ends. This resulted in the decision to bet all our (financial) resources on one imagined end, the Fabulous Food Truck: *“We don’t have that much money, so we want to lose everything we have to show our investors that we are also willing to invest”* (C11). Although we were convinced of the potential of the Fabulous Food Truck, this decision had the negative effect that it restricted us to further experiment with courses of action. So, if the chosen course of action would fail, we could not experiment with or start another course of action. Whereas experimentation is something that expert entrepreneurs apparently do value: *“What you need to know is the minimum you have to earn in order to break-even. Then you have to decide for yourself what the amount of money and time is that you want to spend on this business idea. Then set a deadline, which can of course be adjusted in the meantime, and try to make the best of it. If the money and time is spend, and it didn’t work out the way you hoped, then just quit and start another project!”* (C7).

As an answer to this restricted possibility to experiment with courses of action, we have selected a course of action in which we were still flexible and versatile concerning the exact interpretation of activities. This means that we were still able to adapt to changed insights and could shift towards other business activities within the chosen imagined end: *“We are very flexible and we can easily anticipate on the developments in the food branch and the desires of (potential) customers. This makes the business idea versatile and flexible, which I really prefer”* (C9). Also in order to reduce the risk: *“We have chosen for the Food Truck because (...) the business activities are numerous, which makes the risk lower in my eyes. If one thing doesn’t work, we can start with another activity. It really feels good that we have chosen for the most flexible option”* (C11). So, we noticed that we could not fully apply effectuation as a method without including versatility as selection and evaluation tool for the courses of action. Hence, our findings suggest that *versatility*, next to affordable loss, might also be an important evaluation criteria of the courses of action. When

novice entrepreneurs apply effectuation for new venture creation, a heuristic that might need to be added is: *'Choose a versatile course of action and keep it versatile as long as possible'*.

4.8. DIFFERENT DEGREES OF STAKEHOLDER COMMITMENT

During the new venture creation process we tried to gain commitment of stakeholders. Unlike effectual theory suggests, we observed that it was not always possible and desired by stakeholders to initiate an effectual commitment or partnership in which both parties share risks and benefits, and the stakeholder commits means and constrains goals. In fact, we experienced that stakeholder commitment comes in degrees. This means that stakeholders commit resources for different purposes, under different conditions, and with different levels of involvement.

Type 1: Commitment of relatively inexpensive or inexhaustible resources. We experienced that people are more than willing to commit and share their relatively inexpensive and inexhaustible resources in order to help us with the development of possible courses of action: *"They would like to share 'inexpensive' resources like network, knowledge and time but they don't like to risk something"* (C13). The people we interacted with were not always expecting something in return: *"Although he noticed that there was maybe not an extensive role for his company, he was prepared to think about other options with us"* (C6), and: *"It is really not the case that the potential stakeholders are only looking if there is something in it for them, they are also open and willing to help and advice us for our benefit"* (C6). Moreover, we talked to an experienced entrepreneur who committed his experience: *"The stakeholder committed to us as our advisor during the start-up of our venture"* (C7). In addition, in the second cycle we approached a potential stakeholder in order to try to commit valuable ICT resources. Although this person was focusing on exploring possible courses of action: *"I hope you have enough inspiration now to develop the venture concept and to make something workable of it. Try to work it out and let me know what you have decided on. If you have a more concrete picture of the venture, then contact me if you need someone of my network"*

(C2). So, we observed that he was waiting for more concreteness of the venture concept before committing valuable resources. However, he did hint that he was in for a pre-commitment: *“He is enthusiastic, sees lots of opportunities, and is able to make all the desired applications but when other things are clearer he would like to commit his valuable ICT resources”* (C2).

Type 2: Short-term transactional commitment with effectual elements. The second type of stakeholder commitment can be defined as a *transactional* one in which we had a (short-term) supplier-buyer relationship with the stakeholder in which they did not constrain goals or shared risks. There were effectual elements in this type of stakeholder commitment, like delayed payments terms, making use of stock lots, and creative ways of generating cash. For instance, in cycle 15 we pre-committed a customer: *“This stakeholder might become a customer of us who rents the Food Truck once in a while for his own catering services. For us it is interesting because it brings us some certainty, in order to keep the Food Truck busy. We see it as a creative way to generate cash and to establish our new venture”* (C15). Another creative stakeholder commitment was initiated by a family member who became a supplier of required inventory: *“This person is willing to help us with buying all the kitchen equipment directly from the factory. This will save us much money. He didn’t want to get a compensation for it”* (C13). It seems like the stakeholders were willing to help us in order to contribute to the chance of survival, without having a stake in the venture: *“He is not interested in having a stake in our venture, it seems like he just wants to help us with his knowledge and resources in order to increase the chance of success”* (C13).

Type 3: Long-term commitment with effectual conditions. We noticed that some stakeholders were willing to commit to a long-term effectual partnership in which we both shared risks and benefits. We committed a former colleague who owns his own restaurant now: *“We pitched our idea and without asking him for his resources he said: “I’m in. I will help you”* (C1). After the venture concept became more concrete, this stakeholder became a partner with whom we have a creative payment construction in which he shares risks with us: *“He told us that we could pay him*

for every meal that we sell. So, for instance, he makes enough food for 100 meals, but if we only sell 70, we only have to pay him for these 70 meals” (C4). However, this stakeholder also benefits: *“If he does the purchase of products for us, he reaches a higher level of total purchases which means a reduction in purchase price. So, there is something in it for both of us” (C10), and: “He will also benefit from the success since he will be hired as professional cook during large caterings” (C10).* In another stakeholder commitment that was constructed, there was more focus on sharing risks than sharing benefits: *“The stakeholders are willing to help us with their financial resources, without really benefitting of it themselves. They just believe in the venture concept and want to help us (financially) during the start up of the venture” (C11).* Although we would call these commitments effectual, these stakeholders did not have a formal stake in our venture: *“However, he is not investing money in the project and therefore doesn’t need to have a stake in the company” (C10).* Furthermore, even in this type of commitment, stakeholders did not constrain our goals.

4.9. IMPROVING CHANCES TO COME ACROSS CONTINGENCIES CAN BE REGARDED AS VALUABLE

During the new venture creation process, we noticed that it is valuable and useful to have a proactive stance towards improving the chance that you come across contingencies. For example, we have visited an open day of a large catering service and have engaged in social networking behavior by interacting with many of the employees. We obtained much information and insights with respect to their catering service and strategy during these interactions, without expecting this beforehand. This can be illustrated with the following fragment: *“They exactly told us on what basis they cooperate with other mobile catering companies. This was a surprise for us and it made us think and conclude that our venture concept is also a good addition on their current services” (C15).* This occurrence can be seen as a self-generated contingency that we subsequently incorporated in the process of new venture creation. This experience might imply that contingencies do not only come

across the process as external stimuli, but can also be internally initiated by entrepreneurs who improve the chances to come across such contingencies themselves.

4.10. OVERVIEW OF THE MAIN RESULTS OF THIS STUDY

Table 4. Main results of the venture creation process when deliberately applying the heuristics underlying the process model of effectuation.

Topic	Main findings
Effectuation process in general	<p>One can distinguish three distinct phases in the new venture creation process: divergence, convergence and exploitation of the course of action.</p> <p>Novice entrepreneurs might need some additional iterations of the effectual process in order to obtain expert knowledge, advice and experience for overcoming their lack of experience. This corresponds with the second phase that was distinguished.</p>
Start with your means	A limited pool of resources at the start does not have to be problematic. It is easy to get access to the means of others in your network.
Be transparent during interaction	<p>Novice entrepreneurs need to be totally open and transparent about their ideas and possible courses of action. This appeared to be necessary to convince stakeholders about the opportunities of the possible courses of action.</p> <p>Being and talking openly increases the chance to come across contingencies and possible courses of action.</p> <p>Every single interaction with people resulted in new means and new insights and goals, not only after stakeholder commitment.</p>
Imagine and evaluate courses of action (affordable loss and versatility of course of action)	<p>When the imagined ends are lacking concreteness, it is hard to evaluate on affordable loss.</p> <p>Being creative about the things you really need does not only give control and limits risks, it is highly valued by stakeholders and in turn accelerates stakeholder commitment.</p> <p>Affordable loss is not always working. Sometimes the course of action requires more than the entrepreneur has at hand or can afford to lose. In turn it is not always possible to experiment with courses of action. Therefore it may be necessary to choose for flexibility and versatility in the courses of action. Versatility can be seen as an extra tool for evaluating courses of action.</p>
Stakeholder commitment comes in degrees	<p>There are different degrees of commitment:</p> <ol style="list-style-type: none"> 1. Commitment of relatively inexpensive or inexhaustible resources, such as time, knowledge, experience and network.

	2. Short-term transactional commitment with effectual elements but without sharing risks and benefits.
	3. Longer-term effectual partnership with (some) effectual conditions, such as sharing risk and benefits.

Leveraging contingencies	Entrepreneurs can improve their chances to come across contingencies by having a pro-active stance. This means that contingencies do not only come as external shocks, but are often initiated by the entrepreneur who improves chances to come across them.
--------------------------	--

5. DISCUSSION

5.1 IMPLICATIONS

This real-life action research experiment focused on effectuation as entrepreneurial method used by two novice entrepreneurs who together engaged in creating a venture in an unpredictable situation. As such, this study has led to various new insights about the process model of effectuation, which are summarized in Table 3. By executing the research in practice rather than in a contrived situation as is common in positivist science, the results are grounded in practical action and applied to real-life situations, which makes that this study is highly relevant to practice (Coughlan & Coughlan, 2002). On the other hand, this study also contributes to the development of scientific knowledge and theory because I have made highly interpretive assumptions about the observations that I have made (Baskerville, 1999). As such, these findings have implications for both effectuation as a practical method and as a theoretical construct.

First, this study contributes to the effectuation literature specifically and the entrepreneurship literature more generally, by observing three distinct phases in the new venture creation process when using effectuation. Whereas it is common in the entrepreneurship literature to distinguish explicitly between processes of opportunity discovery, evaluation, and exploitation (Davidsson, 2005; Shane & Venkataraman, 2000), effectuation theory does not distinguish them and rather considers them as an integral part of each iteration of the entire new venture creation process (Sarasvathy, 2001; 2008). By applying effectuation as a method, I experienced similar three phases

during our new venture creation. This suggests that the insights provided by effectuation theory might be integrated with more traditional views on entrepreneurship and it may be possible to distinguish between causal and effectual opportunity discovery, evaluation, and exploitation.

Secondly, within the second phase of our venture creation process, we were looking for expert experience and advice. This need for reassurance originates in our lack of experience with new venture creation, as we are novice entrepreneurs. We have tried to compensate this lack of experience by consulting experts as sounding board (Cull, 2006) who provided us with different opinions and viewpoints that fostered increased knowledge during difficult decision moments. This might imply that experienced entrepreneurs can support novice entrepreneurs during the development of the new venture creation process, by transferring knowledge and experience regarding new venture creation. This could be linked with literature on mentoring, which suggests that experts can function as mentor in order to enhance the development of novice entrepreneurs (St-Jean & Audet, 2008). I suspect that this might improve chances of success and enhance the speed of decision making, which are difficulties that novice entrepreneurs are assumed to face. However, on the other hand, this might imply that novice entrepreneurs should run through some additional iterations of the process model of effectuation in order to gain expert feedback, advice and experience (new means) that can be used in their decision making.

Thirdly, this study contributes to extended knowledge and insight regarding stakeholder commitments within the effectual process. Although the findings do not necessarily challenge or undermine the value of stakeholder commitments for effectual co-creation, I found that it was not always possible or desirable to engage in the long-term effectual partnerships that effectuation theory suggests. Rather, this study shows that stakeholder commitment comes in degrees with respect to their level of involvement in the venture creation process. This implies that when applying effectuation as a method, entrepreneurs should perhaps not focus solely on effectual partnerships but instead also enfold less effectual commitments which can also result in an increased pool of

resources, and subsequent goals. In fact, the resources, such as knowledge, advice, time and feedback that became available through less effectual commitments turned out to be highly valuable for the progress of the studied new venture creation process.

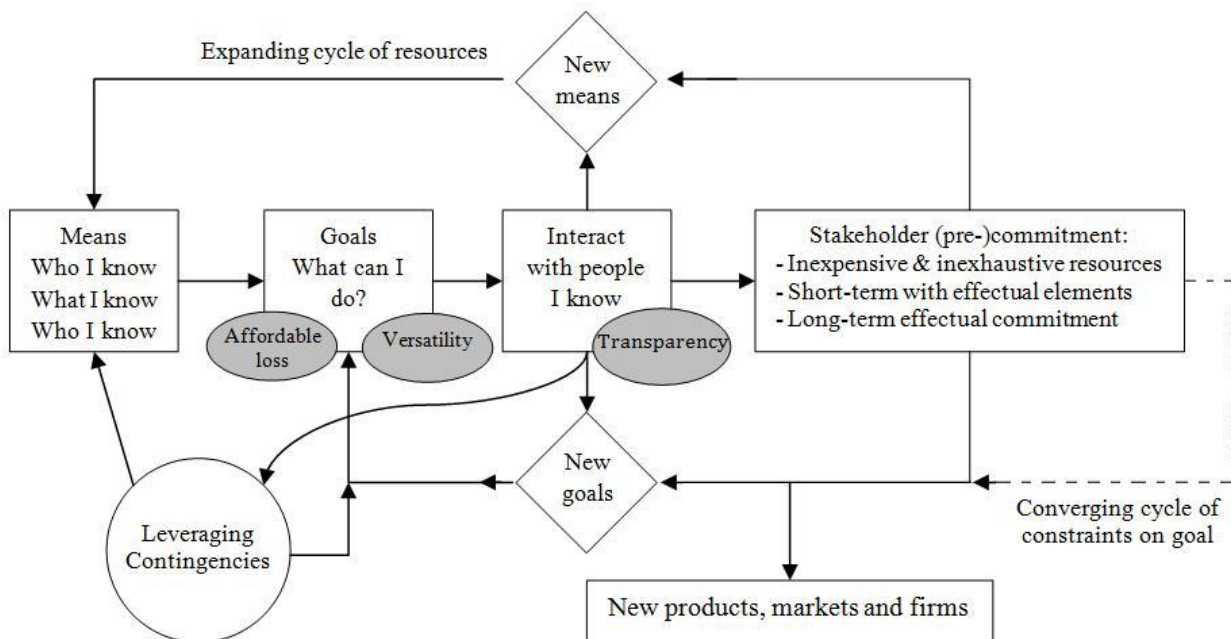
Fourth, this research focused primarily on applying the effectuation process as it has appeared in the literature so far. In addition though, my experiences suggest the inclusion of *transparency* as a requisite for novice entrepreneurs who run through the process model of effectuation and interact with stakeholders and other contributors to the process. This basically means that novice entrepreneurs should disclose their means and goals rather than conceal and protect them. So, adding transparency to the interaction process seems to be a valuable contribution to the process model of effectuation in action when applied by novice entrepreneurs. This also relates to the finding that the expected difficulty for novice entrepreneurs, a limited pool of resources, was not a restriction in this venture creation process. This study showed that it is not difficult for novice entrepreneurs to expand their limited pool of resources at the start with the means of others, provided that they are open and transparent about the venture progress. So, this study implies that being transparent about the venture idea towards people in the environment seemed to play an important role in expanding the pool of resources and coming across contingencies. In turn, this might also be linked with theory on social interaction, which is also identified as valuable in entrepreneurship by authors like Baron (2006) and Alvarez & Busenitz (2001). They suggest that interaction and networks are important sources of information for entrepreneurs as it provides them with substantial exposure to unusual and different ideas and resources (Alvarez & Busenitz, 2001; Baron, 2006). All of this also becomes evident in the advice of Westhead et al. (2005) who encourage novice entrepreneurs to engage in more networking and information exchange opportunities.

Finally, in this study it was found that the value of affordable loss goes beyond providing entrepreneurs with control, towards giving increased access to the means of stakeholders. Moreover, this study suggests that the value of affordable loss increases with the concreteness of the courses of

action. Although a limited pool of resources was not a problem, we observed that this did imply that we could not experiment with various courses of action due to our limited (financial) resources. As a remedy, we included *versatility*, next to affordable loss, as selection and evaluation criteria of the courses of action. This means that we were especially looking for a versatile venture idea, which could be easily adapted to changed circumstances. This especially seems to be important for novice entrepreneurs with limited resources. Looking at current literature on affordable loss and the findings of this research, there might be a close connection between effectuation theory and real option theory (e.g., McGrath, 1997). Real option theory suggests that real options capture the value of managerial flexibility to adapt decisions in response to unexpected market developments. Real options allow a firm to deal with uncertainty by limiting the possible loss (McGrath, 1997). Also Sarasvathy & Venkataraman (2000) have made this link in the past. They argue that this approach, just like effectuation presumes, may not lead to higher success rates but is more likely to reduce costs of failure (Sarasvathy & Venkataraman, 2000). It allows the firm to open itself to pleasant surprises that it cannot possibly forecast through any current prediction of future possibilities (Sarasvathy & Venkataraman, 2000).

The above discussed findings have implications for the process model of effectuation. Figure 4 shows the re-shaped process model of effectuation which is made applicable in practice for novice entrepreneurs.

Figure 4. Adjusted process model of effectuation



The findings of this study indicate that the effectual process, when accompanied by the proposed and submitted changes, is applicable for novice entrepreneurs during their new venture creation process when the surrounding conditions are unpredictable. This implies that the process model of effectuation is suitable as entrepreneurial method to teach and offer students at universities and business school. Honig (2004) comments that a significant portion of contemporary entrepreneurship education appears to be atheoretical and largely unsupported by empirical evidence of its practical effects. This study might be a good attempt to bridge the gap between purely theoretical teaching and real-life practical experiences since it empirically tested effectuation as practical and normative method for novice entrepreneurs while underpinning it with the theory of effectuation. In addition, much of what entrepreneurs do is the product of tacit knowledge, which is referred to as learning by doing. According Honig (2004) educators can address the gap between formal explicit knowledge and tacit knowledge by incorporating experiential education into the curriculum. I suggest that this experiential component might be achieved by adding effectuation as practical and theoretical construct to the curriculum of entrepreneurship programs. In that case, it

might be fruitful for the curriculum to include activities like mentoring by local entrepreneurs, real-life case studies (Kuratko, 2005) and utilizing action learning, which envisions learning as a social and organizational process (Honig, 2004). I think that this can enhance students' use of entrepreneurial heuristics and behaviors, which are i.e. formulated in this Master Thesis, and can contribute to teaching students the entrepreneurial perspective. Given the importance of entrepreneurship education, as was explained in the introduction, a careful pedagogical analysis and design is vital in this discussion.

The methodological implication of this study is that, to my knowledge, action research has not been applied to effectuation research before. Besides, Neergaard & Ulhoi (2007) see no evidence that this research method has been applied in entrepreneurship research at all. With this real-life action research experiment I have shown that it is possible and productive to apply this method to entrepreneurship research in general, and effectuation research more particularly. An important note here is that, although it was possible, I did experience that it requires very high levels of commitment and diligence of the action researcher who performs the dual role of entrepreneur and researcher. To that end, I propose that other entrepreneurial processes can also be empirically evidenced with action research, but only if the researcher(s) are willing and able to achieve the high level of commitment that is required.

5.2. LIMITATIONS AND FURTHER RESEARCH

This study has some limitations that are important to remark. The most important limitation concerns the dual roles of my student colleague and me, as being researcher and entrepreneur simultaneously. Therefore, the principal threat to the validity of this study is the lack of impartiality on the part of the action researchers. Most of the data that is recorded, measured and analyzed are products of the thoughts and interpretations of the researchers-entrepreneurs, thereby not independent of human judgment (Babbie, 2010). Whereas action research does not claim to be

objective as it is rather subjective in nature, I have tried to limit this bias by including two coders in this study who both individually coded all the research diaries. Moreover, I have explicitly stated the purpose and goals of the research during each action research iteration, and have consciously and deliberately enacted the action research cycles in order to test my own assumptions with each iteration (Coughlan & Coughlan, 2002).

Secondly, action research involves cases which are contextually embedded and in which the system as a whole matters. For this study, this means that I have gathered detailed information and insights about one specific case, which is the new venture creation process of two novice entrepreneurs in the hospitality industry. The contextual embeddedness restricts the generalizability of the findings to other situations. This means that generalities must be tempered with an interpretation to the extent of similar settings to which the theory or solution can be expected to hold (Baskerville, 1999). I have tried to restrain this limitation by continuously generalizing the findings towards the theory of effectuation. However, generalizing the findings to other situations still remains subject of further research.

Finally, action research is quite complex to conduct and report and is very time consuming due to its cyclical and iterative nature. While this action research study was performed within a period of 7 months, a typical action research project can easily take up to 3 years. Although I assume that I have captured most elements and factors of the gestation phase of our venture creation process within this time frame, it might also be interesting to focus on what will happen during later stages of the entrepreneurial process. However, due to time restrictions, I direct the interesting study of these later stages forward towards future research.

Although this research contributes to the establishment of the qualitative foundation for effectuation as entrepreneurial method for novice entrepreneurs, future research should be directed towards testing the findings with larger samples in order to contribute to the generalizability of the results. In particular, further research should focus on the question whether the findings regarding the

three phases of effectuation, the different degrees of stakeholder commitment, and the add-on of transparency and versatility also apply to situations in which expert entrepreneurs use the effectual logic in practice. These type of studies should also be executed in different contexts and situations.

The findings of this study suggest some interesting links between effectuation theory and other streams of literature. Above, I already mentioned the connection between effectuation and more traditional views on entrepreneurship (e.g., Shane & Venkataraman, 2000), with mentoring (e.g. St-Jean & Audet, 2008), social interaction (e.g. Alvarez & Busenitz, 2001; Baron, 2006) and with real option theory (e.g. McGrath, 1997). Furthermore, the findings regarding stakeholder commitments and transparency also propose interesting directions for linking effectuation to theories of legitimization, since both relate to how entrepreneurs obtain legitimacy during the creation of a new venture (Delmar & Shane, 2004). Exploring these connections may be fruitful in providing additional insights into effectuation theory.

6. CONCLUSION

This action research experiment provides new and detailed empirical insights into the dynamics of effectuation and into the effectual behaviors of novice entrepreneurs. The findings mainly suggest a) that the effectuation process can be divided into three distinct phases – divergence, convergence, and exploitation of entrepreneurial opportunities, b) that stakeholder commitment comes in at least three degrees of effectual involvement, c) that entrepreneurs need to be highly transparent about their means and goals in order to act effectually, and d) that entrepreneurs can act effectually by choosing a versatile venture idea. Furthermore, with regard to novice entrepreneurs specifically I find that they might require additional iterations of the effectual cycle in the second, convergent phase of the effectual process and might need to be more open than experienced entrepreneurs to gain legitimacy and develop their venture. Based on these findings, I introduced an adjusted process model of effectuation in order to make the effectuation theory more applicable for

novice entrepreneurs in real-life unpredictable situation. This means that, overall, I can conclude that novice entrepreneurs can use effectuation as method, but only with some modifications of the process model. Based on this study, this implies that effectuation is adequate for teaching students (novice entrepreneurs) the process of new venture creation, which in turn means that effectuation can be seen as a fruitful contribution to curriculum of the entrepreneurship education program at universities and business schools alike. I hope that the findings of this qualitative action research study will stimulate other scholars to conduct further research on how these the findings and implications hold with larger samples, different contexts and when applied by experts entrepreneurs.

REFERENCES

- Altrichter, H. & Holly, M. 2005. Research diaries. In: Research methods in the social sciences by Somekh, B. & Lewin, C. Sage Publications
- Alvarez, S. & Busenitz, L. 2001. The entrepreneurship of resource based theory. *Journal of Management*, 27 (6), 755-775
- Avison, D., Lau, F., Meyer, M. & Nielsen, P.A. 1999. Action research: to make academic research relevant: researchers should try out their theories with practitioners in real situation and real organizations. *Communications of the ACM*, 42 (1), 94 – 97
- Babbie, E. 2010. The practice of Social Research, eleventh edition. Belmont, USA: Thomson Wadsworth.
- Baron, R. 2006. Opportunity Recognition as Pattern Recognition: How Entrepreneurs ‘Connect the Dots’ to identify new Business Opportunities. *Academy of Management Perspectives*
- Baskerville, R. 1999. Investigating information systems with action research. *Association for Information Systems*, 2 (19), 1-32
- Baskerville, R. & Wood-Harper, T. 1996. A critical perspective on action research as a method for information systems research. *Journal of information technology*, 11, 235-246.
- Baskerville, R., & Myers, M. 2004. Special issue on action research in information systems: making IS research relevant to practice. *MIS Quarterly*, 28 (3), 329-335.
- Bhide, A. 2000. The origin and evolution of new businesses. London: Oxford University Press
- Birks, M. Chapman, Y. & Francis, K., 2008. Memoing in qualitative research: probing data and processes. *Journal of research in Nursing*, 13 (1), 68-75
- Blekman T. 2011. Corporate Effectuation: What Managers should learn from Entrepreneurs! *Academic Service*, 1-224
- Boeije, H. 2005. *Analyseren in kwalitatief onderzoek*. Amsterdam: Boom Onderwijs
- Bolger, N., Davis, A. & Rafaeli, E. 2003. Diary methods: Capturing Life as it is Lived. *Annual Review Psychology*, 54, 579-616

- Boyatzis, R. 1998. Transforming qualitative information: thematic analysis and code development. Sage Publications
- Brydon-Miller, M., Greenwood, D., & Maguire, P. 2003. Why action research? *Action Research*, 1 (1), 9-28
- Chandler, G., DeTienne, D., & Mumford, T. 2007. Causation and effectuation: Measure development and theoretical implications. *Frontiers of entrepreneurship research*, 27, 1-13
- Chandler, G., DeTienne, D., McKelvie, A., & Mumford, A. 2011. Causation and effectuation processes: validation study. *Journal of Business Venturing*, 26, 375–390.
- Cohen, J. 1960., A Coefficient of agreement for nominal scales. *Educational and psychological measurement..* 20, 37-46
- Coughlan, P. & Coughlan, D. 2002. Action research for operations management. *International Journal of Operations & Production Management*, 22 (2), pp. 220-240.
- Cull, J. 2006. "Mentoring Young Entrepreneurs: What Leads to Success?" *International Journal of Evidence Based Coaching and Mentoring*, 4, 8-18.
- Davison, M., Martinsons, M., & Kock, N. 2004. Principles of canonical action research. *Information Systems Journal*, 14, 65-86
- Davidsson, P. 2003. The domain of Entrepreneurship Research: Some suggestions. In Jerome A. Katz & Dean A. Shepherd (ed.) *Cognitive Approaches to Entrepreneurship Research (Advances in Entrepreneurship, Firm Emergence and Growth, Volume 6)*, Emerald Group Publishing Limited, 315-372
- Davidsson, P. 2005. The Entrepreneurial Process as a Matching Problem. Brisbane Graduate School of Business
- Delmar, F., & Shane, S. 2004. Legitimizing first: organizing activities and the survival of new ventures. *Journal of Business Venturing*, 19, 385-410.
- Dew, N., Read, S., Sarasvathy, S. & Wiltbank, R. 2008. Outlines of a behavioral theory of the entrepreneurial firm. *Journal of Economic Behavior & Organization*, 66, 37-59

- Dew, N., Read, S., Sarasvathy, S. & Wiltbank, R. 2009a. Effectual versus predictive logics in entrepreneurial decision-making: Differences between experts and novices. *Journal of Business Venturing*, 24, 287–309
- Dew, N., Sarasvathy, S.D., Read, S., & Wiltbank, R. 2009b. Affordable loss: Behavioral economic aspects of the plunge decision. *Strategic Entrepreneurship Journal*, 3 (2), 105–126
- Dew, N., Read, S., Sarasvathy, S. & Wiltbank, R. 2011. On the entrepreneurial Genesis of New Markets: Effectual Transformations Versus Causal Search. *Journal of Evolutionary Economics*, 21, 231-253
- Dreyfus, H., & Dreyfus, S. 1986. *Mind over Machine: The Power of Human Intuition and Expertise in the Age of the Computer*. Oxford: Basil Blackwell.
- Fayolle, A. & Gailly, B. 2008. "From craft to science: Teaching models and learning processes in entrepreneurship education", *Journal of European Industrial Training*, 32 (7), 569 – 593
- Fayolle, A., Gailly, B. & Lassas-Clerc, N. 2006. Effect and counter effect of entrepreneurship education and social context on student's intentions, 24, 509 – 523
- Fayolle, A. & Klandt, H. 2006. *International entrepreneurship education: Issues and newness*. Cheltenham, UK: Edward Elgar Publishing
- Fiet, J. 2001. The theoretical side of teaching entrepreneurship. *Journal of Business Venturing*, 16, 1-24
- Fisher, G. 2012. Effectuation, Causation and Bricolage: A behavioral Comparison of Emerging Theories in Entrepreneurship Research. *Entrepreneurship Theory and Practice*, 36, 1019- 1051
- Greve, A. & Salaff, J. 2003. Social networks and entrepreneurship. *Entrepreneurship Theory and Practice*, 28, 1-22
- Gustafsson, V. 2004. *Entrepreneurial decision-making*. Doctoral dissertation. Jönköping International Business School.
- Gwet, K. 2001. *Handbook of Inter-rater Reliability. The definitive Guide to Measuring the Extent of Agreement Among Multiple Raters*. Advanced Analytics, Third edition

- Harmeling, S., Oberman, S., Venkataraman, S., & Stevenson, H. 2004. That my neighbor's cow might live: Effectuation, entrepreneurship education, and regional development in Croatia. In A. Shaker, S.A. Zahra, C.G. Brush, P. Davidsson, J. Fiet, P.G. Greene, R.T. Harrison, M. Lerner, C. Mason, G.D. Meyer, J. Sohl, & A. Zacharakis (Eds.), *Frontiers of entrepreneurship research*, 24 (1–14). Wellesley, MA: Babson College.
- Harting, T. 2004. Entrepreneurial effectuation in a corporate setting: The case of Circuit City's Carmax unit. Paper presented at the Babson Kauffman Entrepreneurship Research Conference, Glasgow, Scotland.
- Hindle, K. 2007. Teaching entrepreneurship at university: from the wrong building to the right philosophy, in Fayolle (ed.). *Handbook of research in entrepreneurship education*, Cheltenham, UK and Northampton, MA, USA: Edward Elgar, vol. 1, pp. 104 -126
- Hmieleski, K. & Corbett, A. 2008. The contrasting interaction effects of improvisational behavior with entrepreneurial self-efficacy on new venture performance and entrepreneur work satisfaction. *Journal of Business Venturing*, 23, 482-296
- Honig, B. 2004. Entrepreneurship education: Toward a model of contingency-based business planning. *Academy of Management Learning & Education*, 3(3), 258-273
- Jackson, S. 2012. *Research Methods and Statistics: a critical thinking in approach*. Fourth Edition. Wadsworth Cengage Learning
- Kirby, D. 2005. Entrepreneurship Education: Can business Schools meet the challenge? In: *Silicon Valley review of global entrepreneurship research*, 1, 173 – 193
- Kraaijenbrink, J. & Ratinho, T. 2010. Effectuation, Causation, and firm growth: a study of written business plans of micro and small firms. Nikos, Dutch Institute for Knowledge Intensive Entrepreneurship, University of Twente
- Kraaijenbrink, J., Ratinho, T. & Groen, A. 2011. Planning effectual growth: A study of effectuation and causation in nascent firms. Nikos, Dutch Institute for Knowledge Intensive Entrepreneurship, University of Twente
- Kuratko, F. 2005. The emergence of Entrepreneurship Education: Development, Trends, and Challenges. *Entrepreneurship Theory and Practice*, 29 (5), 577-598

- Lewin, K. 1952. Field theory in social science: Selected theoretical papers by Kurt Lewin. London: Tavistock.
- McGrath, R. 1997. A real options logic for initiating technology positioning investments. *Academy of Management Review*, 22, 974-996
- Neergaard, H. & Ulhoi, J.P. 2007. *Handbook of Qualitative Research Methods in Entrepreneurship*. Edward Elgar Publishing
- Perry, J., Chandler, G., & Markova, G. 2012. *Entrepreneurial effectuation: a review and suggestions for future research*. Baylor University
- Read, S. & Sarasvathy, S. 2005. Knowing what to do and doing what you know: Effectuation as a form of entrepreneurial expertise. *The journal of Private Equity*, 9 (1), 45-62
- Read, S., Song, M. & Smit, W. 2009a. A meta-analytic review of effectuation and venture performance. *Journal of Business Venturing*, 24, 573-587
- Read, S., Dew, N., Sarasvathy, S.D., Song, M., & Wiltbank, R. 2009b. Marketing under uncertainty: The logic of an effectual approach. *Journal of Marketing*, 73, 1–18.
- Read, S., Sarasvathy, S., Wiltbank, R., Dew, N. & Ohlsson, A. 2011. *Effectual entrepreneurship*. Taylor & Francis Group
- Reynolds, M., Hay, M., Bygrave, W., Camp, M. & Autio, E. 2000. *Global Entrepreneurship Monitor. Executive Report*
- Reynolds, P., Bosma, N., Erkkö, A., Hunt, S., De Bono, N., Servais I., Lopez-Garcia, P. & Chin, N. 2005. *Global Entrepreneurship Monitor: Data Collection Design and Implementation 1998 – 2003*. *Small Business Economics*, 24, 205-231
- Sarasvathy, S. 2001. Causation and Effectuation: A theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*, 26 (2), 243-263
- Sarasvathy, S. 2008. *Effectuation: Elements of Entrepreneurial Expertise*. Edward Elgar Publishing Limited
- Sarasvathy, S. Video on Effectuation.org. Retrieved on 04-10-2011

- Sarasvathy, S. & Dew, N. 2003. Effectual networks: A pre-commitment approach to bridging the gap between opportunism and trust. *Effectuation.org*
- Sarasvathy, S. & Dew, N. 2005. New Market Creation through Transformation. *Journal of Evolutionary Economics*, 15, 533-565
- Sarasvathy, S. & Dew, N. 2009. Without judgment: and empirically-based entrepreneurial theory of the firm. *The Review of Austrian Economics*.
- Sarasvathy, S.D. & Kotha, S. 2001. Dealing with Knightian uncertainty in the new economy: The Real-Networks case. In J. Butler (Ed.), *Research on management and entrepreneurship* (31–62). Greenwich, CT: IAP, Inc.
- Sarasvathy, S. & Venkataraman, S. 2011. Entrepreneurship as method: Open questions for an entrepreneurial future. *Entrepreneurship Theory and Practice*, 35 (1), 113-135
- Sardeshmukh, S.R. & Smith-Nelson, R.M. 2011. Educating for an entrepreneurial career: developing opportunity-recognition ability. *Australian Journal of Career Development*, 20 (3)
- Shane, S. & Venkataraman, S. 2000. The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25, 217-226.
- Simon, H. 1996. *The Sciences of the Artificial*. Third Edition. Massachusetts Institute of Technology
- St-Jean, E. & Audet, J. 2008. The role of mentoring in the learning development of the Novice Entrepreneur: Can a mentor make a difference? *International Council for Small Business World Conference*
- Susman, G.I. & Evered, R.D. 1978. An assessment of the Scientific Merits of Action Research. *Administrative Science Quarterly*, 23, 582-603
- Thurik, R. 2009. *Entreprenomics: entrepreneurship, economic growth and policy*. Centre for advanced Small Business Economics at Erasmus University Rotterdam, EIM Business and Policy research Zoetermeer, Max Planck Institute of Economics Jena, and Free University Amsterdam
- Westhead, P., Ucbasaran, D., & Wright, M. 2005. Experience and cognition: do novice, serial and portfolio entrepreneurs differ? *International Small Business Journal*, 23, 72

Wiltbank, R., Dew, N., Read, S. & Sarasvathy, S. 2006. What to do next? The case for non-predictive strategy. *Strategic Management Journal*, 27, 981-998

Wiltbank, R., Read, S., Dew, N. & Sarasvathy, S. 2009. Prediction and control under uncertainty: outcomes in angel investing. *Journal of Business Venturing*, 24, 116-133

APPENDIX 1. CODING SCHEME

Due to the size of the coding scheme, I have attached it in a separate document which is copied on the disk.