Opportunities in the process of becoming an entrepreneur

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1. Introduction

The role of opportunities in becoming an entrepreneur and in the entrepreneurial process is undeniable (Shane and Venkataraman 2000) and challenging (Gaglio and Katz 2001). Brush et al. (2003) suggest that the domain of entrepreneurship foremost and above all concerns opportunity exploration, recognition, and exploitation in order to create value for and within diverse contexts. According to Ardichvili et al. (2003), the importance of the opportunity process in entrepreneurship research still demands a better understanding of its definitions and phases. As Gaglio and Katz (2001, p.107) write: "The journey from idea to feasible opportunity to successful opportunity must be explained in a theory of entrepreneurship. This journey (…) has identifiable stages even if the boundaries between each stage are fuzzy."

However, the "journey", even though it is taken by many individuals every day, has still not been explored enough within the field of entrepreneurship. On the contrary, opportunity is perceived to be an elusive concept (Dimov 2011), as it entails diverse ideas, approaches, methodologies and even vocabularies. Despite an extensive amount of research on opportunity, the question of what opportunities are and how to identify, develop and exploit them has not been sufficiently answered. As a consequence, we still do not understand how opportunities come into existence. Ardichvili et al. (2003) assert that there is no agreement among entrepreneurship researchers on the major concepts used to define and operationalize the opportunity process.

One of the reasons for why the opportunity process is confusing and interpreted differently by different authors is its complexity and diverse nature. There are plenty of models which try to explain the opportunity process (Bhave 1994, Schwartz and Teach 1999, Singh 1999, Gaglio and Katz 2001). Depending on the particular opportunity type or definition that the authors choose to use, some authors argue that opportunities 'exist out there' in the form of unmet needs, unsolved problems, or inefficient processes and it is the job of the entrepreneur to uncover these opportunities (Aldrich and Cliff, 2003; Kim, Aldrich and Keister, 2003; Shane, 2003; Gartner et al 2004), whereas others posit opportunities as a product of one's mind (Shane and Venkataraman 2000; Ardichvili et al. 2003; Gartner et al. 2003).

Considering the scope and nature of the opportunity process, different approaches denote different ideas. The opportunity process may represent rational thinking, an act taken through an action-oriented process, or the use of cognitive frameworks. For example, Venkataraman and Sarasvathy

(2001) suggest that opportunity recognition is a process of generating idea, beliefs and actions according to a purpose. Sarason et al. (2006, p. 287), similarly to Shane (2003), understand the entrepreneurial process as the dynamic interaction of an individual and a particular opportunity. For Baron (2006), opportunity recognition involves using cognitive frameworks that one has acquired through experience to perceive connections between seemingly unrelated events or trends in the external world, in other words, it is a process "through which ideas for potentially profitable new business ventures are identified by specific persons" (Baron and Ensley 2006). The opportunity process looks different in each of the particular cases. Each of them involves different stages, resources and time sequences. Understanding a process either as a linear decision, as a cognitive process based on the use of previous cognitive frameworks, or as an iterative action leads us to question the idea of the process's uniformity and poses a question regarding the existence of any generic process for identifying opportunities. As a solution to these differences, Ardichvili et al. (2003) suggest that a full appreciation of the opportunity process requires a more coherent approach and a more comprehensive theory on opportunity.

However, we argue that rather than providing a comprehensive theory on opportunities, there are different ways of understanding opportunities, which also represent different paths to maximizing the opportunity process. When considering the concept and the process of opportunities, it seems to be too simplistic to treat opportunity as a universal phenomenon. If there is no one type of opportunity, and an understanding of the nature of the opportunity process varies among scholars, it is possible that we cannot discuss a single type of opportunity process leading from idea generation to venture creation. Thus, we claim that there are no universal, consecutive phases of the opportunity process either. A different understanding of opportunities implies a different understanding of their identification, evaluation, and exploitation.

Although some scholars already advocate studying the dynamics and contingency of the opportunity process (Gaglio 2004), studying the dynamic processes of opportunities is difficult and requires a longitudinal approach, either by following how opportunities come into existence or by finding a way to catch, retrospectively, how they came into existence. Learning from Dimov's (2011) retrospective approach of analysing how individuals talk about their past ventures, we further develop the retrospective approach by adopting a documentary videography approach for understanding the opportunity process in order to better understand how entrepreneurs experience the opportunity process from idea generation to exploitation. As Gregoire et al. (2010) suggest, instead of only discussing the definitions and nature of opportunities, we should monitor how opportunities evolve in the process of becoming an entrepreneur and recognize its different phases and the relations between those phases.

First, we identify different approaches to the opportunity and opportunity process drawn from previous research. Then, by adopting a multiple, longitudinal case-study approach and a documentary videography with editing method, we recreate entrepreneurs' opportunity processes and analyse their "specific paths in terms of sequences and events" (Dimov 2011, p.70). Finally, by implementing pattern matching logic, we compare these opportunity processes to the identified theoretical approaches.

2. Chaos of the opportunity process

Despite the richness of theoretical and empirical research on opportunity constructs (Short et al. 2009), still less attention has been paid to the process by which an individual identifies opportunities (Gregoire et al. 2010). The gaps in opportunity process research provoke chaos when we try to reconstruct and follow it. Depending on the context and the aims of the research, different

authors concentrate on different types of opportunity processes. Researchers have alternately explained the opportunity process on the grounds of structuration theory (Sarason et al. 2006), Dubin's theory building framework (Ardichvili et al. 2003), organizational learning (Lumpkin and Lichtenstein 2005, Lumpkin and Crossan 2005), and discovery and creation theory (Alvarez and Barney 2006). Companys and McMullen (2007) distinguish three schools of thought regarding opportunities: the economic, cultural cognitive, and socio-political. However, as the approaches have been developed simultaneously and were analysed in such different contexts, no common conceptualisation exists to date. As a consequence, opportunity may be found through the process of identification (Ardichvili et al. 2003, Gaglio 2001, 2004; de Tienne 2004; Shephard 2005), recognition (Shane and Venkataraman 2000, Lumpkin and Lichtenstein 2005, Corbett 2005), development and generation (Alson and Kaikkonen 2004), discovery (Klein 2008, Shane 2000, Alvarez 2007, Holcombe 2003, Alvarez and Barney 2007), or creation (Holcombe 2003, Alvarez and Barney 2007). Although all of these terms describe processes connected with opportunity, it is impossible to detect their precise understandings since they differ as much between themselves as within a single process category. For example, taking only recognition concept, Lumpkin and Lichtenstein (2005) define opportunity as the identification of a good idea and the transformation of it into a business concept that adds value and generates revenue, whereas Baron (2006) understands it as the detection of patterns and Shane (2000) argues that individuals discover opportunities by recognizing the value of new information. Although there is evidence that each of these perspectives has made a significant contribution to the field, none of the approaches is solely able to explain the complexity and diversity of the opportunity process.

Different understandings and terminology concern not only the opportunity process in general, but also its particular phases. For example, for Lumpkin et al. (2004, 2006) the opportunity process consists of a discovery phase (consisting of preparation, incubation, and insight) and a formation phase (consisting of evaluation and elaboration). Schwartz and Teach (2000), as well as Shane and Venkataraman (2000), distinguish two phases of the process: opportunity recognition and exploitation. Lindsay and Craig (2002) treat opportunity recognition as a part of the opportunity formulation process, in which it is preceded by opportunity search and followed by opportunity evaluation and verification. For Ardichvili et al. (2003), opportunity identification is a triad of recognition, development, and evaluation. As a consequence, understanding the opportunity process becomes even more vague and chaotic.

The multiplicity of approaches to opportunities, as well as the chaotic and diverse character of the opportunity process, indicates that we do not really know how the process actually evolves and how entrepreneurs develop their ideas. Following the ideas of Alvarez and Barney (2007), we adopt an approach whereby the agency for creating opportunity is brought by the entrepreneurs who exploit such opportunities. Similarly, as Shane and Venkataraman (2000) also suggest, the exploitation of opportunity depends on the nature of human involvement. As Mc Mullen et al. (2007, p. 278) state, "opportunity is a concept that finds its meaning in the context of human action". Alternatively, Shane (2003) positions entrepreneurship within an individual–opportunity nexus.

However, different scholars view the nature of human involvement differently. It may concern both uncovering and creating opportunities (Alvarez and Barney 2007). If opportunities take the form of unmet needs, unsolved problems, or inefficient processes, then it is the entrepreneur who uncovers them (Aldrich and Cliff, 2003; Kim, Aldrich & Keister, 2003; Shane, 2003; Gartner et al 2004). If opportunities are a product of one's mind (Shane & Venkataraman, 2000; Ardichvili et al., 2003; Gartner et al., 2003), then it is the entrepreneur who creates them. Human involvement in the process might concern a systematic, planned, and rational search (Drucker, 1998; Zietsma, 1999), in which an entrepreneur detects the individual relational dynamics among various ideas and their

possible interplay with the outer world and cognition (Baron 2006), or a process in which an entrepreneur enacts those ideas (Sarasvathy). Drawing from this diversity of viewpoints, we suggest that different ideas about human involvement within the opportunity process leads to different approaches to understanding the opportunity process.

The other criterion is to also include the notion of exploitation within the opportunity process. What the above researchers have in common is that, in general, they argue that the opportunity identification phase might be followed by an evaluation phase (Gregoire et al. 2010). However, none are sure about the exact position of exploitation in this process, even though opportunities per se are useless unless they are exploited. Thus, in our view, the opportunity process's outcome is not merely based on an opportunity, but rather on an exploited opportunity. At the core of the opportunity process is the question of how ideas come into existence and, thus, the notion of entrepreneurial opportunity also includes the ability to exploit such an opportunity. Such an understanding of the opportunity process is in line with the views of Shane and Venkataraman (2000, p. 218), who define the field of entrepreneurship as the study of "how, by whom, and with what effects opportunities (…) are discovered, evaluated, and exploited". They also claim: "Although the discovery of an opportunity is a necessary condition for entrepreneurship, it is not sufficient. Subsequent to the discovery of an opportunity, a potential entrepreneur must decide to exploit the opportunity." However, the idea of opportunity exploitation has been overlooked or marginalized so far. The concept per se appears in the research on opportunities quite often, but in-depth research concentrates above all on identification (recognition, discovery) and less often on the evaluation phase, not to mention the notion of exploitation. Ignorance of the exploitation phase is one of the reasons for the existing chaos regarding an understanding of the opportunity process; that is to say, unless researchers focus on the point at which an opportunity has been exploited, they cannot discuss the opportunity process in its entirety. Regarding an understanding of the opportunity process as a multi-stage process, one which embraces the phases of identification, evaluation, and the exploitation of opportunities (not necessarily in this consecutive order), is a process that leads from idea generation to venture creation.

Thus, in our view, the inability of researchers to reach a shared understanding of the opportunity process is a consequence not only the different ontological positions of the authors, the different schools of thought they represent, and their particular interests and general approach to entrepreneurship, but also results from the different perspectives on the nature of human involvement in the opportunity process and its consequences in terms of the exploitation of opportunities.

3. Three approaches to opportunity process.

The nature of human involvement determines the opportunity process. The view of the entrepreneur as a human being looking for and approaching new opportunities is shared by three leading economists interested in entrepreneurship: Cantillon, Kirzner, and von Mises. They have a common understanding of an equilibrium goal (equilibrium depends on the actions of individuals) and all represent a functional approach in terms of understanding the entrepreneur. However, even if they agree that an entrepreneur is a human being approaching new opportunities, Cantillon sees him or her as a 'judgment maker', Kirzner as an 'arbitrageur' and von Mises as a "speculator". Differences in the nature of human involvement prompted us to recognize three different roots for the opportunity process and three different approaches to the opportunity process.

The first approach to the opportunity process stems from the views of Cantillon (1931), who considered the entrepreneur as an individual within an organized system of interconnected markets

that operate to achieve a kind of equilibrium. The institutions of this organized system evolve over time in response to "need and necessity". An entrepreneur assumes the risk of uncertainty inherent in market activities and plays the role of a coordinator by matching producers with consumers making rational judgments in an uncertain environment. Cantillon argued that economic science is a science of pure choice, simply because it is built on the purposefulness of human action. He was more interested in the function rather than the personality of the entrepreneur. According to Cantillon, the opportunity process takes place when individuals, by way of a purposeful, deliberate, and conscious search (Drucker, 1998; Zietsma, 1999), identify and filter entrepreneurial opportunity for venture creation (Choi & Shepherd 2004) or any other processes worthy of development (Ardichvili et al., 2003). Objective opportunities exist and are dependent on entrepreneurial action within the society (Singh et al., 1999). However, the conditions that are necessary in order for the search processes to occur require the presence of central artefacts and the business contexts within which decisions are made (Sarasvathy, 2001). Individuals are assumed to be rational in their judgments and search for opportunities as a solution for specific problems or needs. In that sense, the process of searching is a human action for evaluating alternatives and making choices. In the search approach, the nature of the process is characterized by a linear process from idea to opportunity and, further, to its exploitation, and the process moderators are based on past knowledge and experiences. The process begins by identifying a need to be fulfilled or a problem that is systematically being solved.

The second and third approaches are rooted in Austrian economics. They are inspired by von Mises's (1949) views, and have been further developed by Kirzner (1963). They both agreed that equilibrium is not a given condition of the economy and both investigated the market process leading to equilibrium in the economy, and made the entrepreneur responsible for this process to happen. However, for Mises an entrepreneur creates opportunities by creating disequilibria, while for Kirzner the entrepreneur finds opportunities by identifying disequilibria in the market.

For Kirzner (1973), the market process is driven by individuals who use their cognitive abilities to acquire better information about the plans being made by fellow market participants. This twofold influence (the nature of the entrepreneur and cognitive ability) is, according to Sandye (2006), manifest in the concept of alertness, which reflects the entrepreneur's tacit nature of knowledge in the discovery of opportunities. According to Kirzner`s views, the second approach posits opportunities as the responses of individuals to changes in the environment. Opportunities exist independently of entrepreneurial action and need to be discovered as objective phenomena. The individuals are "alert and sensitive to their environments" (Kirzner, 1997; Shane, 2003). However, if entrepreneurs and non-entrepreneurs differ, then not everyone knows about particular opportunities, or, even if they do, not everyone will be predisposed to exploit them. This approach assumes that entrepreneurs and non-entrepreneurs must differ in some important ways (Alvarez and Barney, 2007). Individuals have considerably less useful ex-ante information about the opportunities and have to rely upon their cognitive abilities to identify opportunities as they arise. Individuals may already possess some of this information from previous experience within a particular environment, or they may collect it as they begin to look for possible opportunities within a recently changed environment (Casson, 1982). Alert entrepreneurs may even discover opportunities without engaging in a systematic search. In this approach, discovery is a process of using individual cognitive abilities and past cognitive patterns (Baron 2006) to connect different ideas. Accordingly, the opportunity process is non-linear, as opportunity recognition and its evaluation are intertwined, and process moderators are past cognitive patterns; Baron (2006), for example, has elaborated on such process moderators in his work. The process begins with identifying new situations or a possible new interplay between them, which is then corrected for errors and new ways of dealing with the situation or interplay are created.

For Mises (1949), the market process is determined by the daring, imaginative, and speculative actions of entrepreneurs who identify opportunities (within the condition of market disequilibria). He argues that economic science can only be verified by including the fundamental proposition that human beings act. This methodological apriorism assumes that entrepreneurship always involves human action and interaction (Gunning 1996), and that entrepreneur is an individual who acts upon existing opportunities (von Mises, 1949). As a result, the final identified approach proposes that individuals do not recognize opportunities first and then act (Ardichvili et al., 2003; Choi, 1993; Huber, 2001). Rather, they act, wait for a response to their actions (usually from the environment), and then they modify their actions and act again. In this sense, opportunities do not exist until individuals act to create them (Aldrich and Zimmer, 2006; Gartner, 1985; Sarasvathy, 2001; Weick, 1979). Hence, Ardichvili et al. (2003) claim that opportunities are made or created but not found. Individuals can rarely separate the end point from the beginning (Alvarez & Barney, 2007). For Gartner et al. (2003), opportunities are the result of individuals' actions, rather than a result of what they see at a particular point in time. In this approach, entrepreneurs during the opportunity process have considerably less useful ex-ante information about the opportunities they are forming than is assumed to be in the case with search and discovery approach (Baker et al., 2005). The action approach interprets the results of experience-oriented actions. In this approach, different phases of the opportunity process are cyclical and intertwined and past behaviour patterns perhaps best describe moderators within the process. The process begins with identifying the consequences of an individual's actions and their experiences and is followed by creating new means and new ends.

These roots to the opportunity process and ways in which different scholars choose to interpret human involvement within the opportunity process leads to three different approaches: (1) search (Cantillon 1931, Caplan 2000), (2) discovery (Kirzner 1979, Shane 2000, 2003; Shane and Venkataraman 2000), and (3) action (Mises 1949; Venkataraman 2003). Each approach represents a different understanding of the opportunity process. The differences concern the nature of human involvement, but also a comprehension of opportunity and the opportunity process and its moderators and phases.

Table 1. Three different approaches to the opportunity processes

Criteria	Search process	Discovery process	Enacting process
Roots	Cantillon 'judgment maker'	Kirzner 'arbitrageur'	Mises 'speculator'
Nature of human involvement	Human action of evaluating alternatives and making choices	Use of cognitive abilities by alert individuals to 'connect the dots'	Interpreting the consequences as a result of action-based experience
Opportunity	Opportunity is a solution to the problem or need identified by an entrepreneur Opportunities exist, independent of entrepreneur's thinking	Opportunity is a response by an individual to changes in the environment Opportunities exist, independent of entrepreneurial actions	Opportunity is a result of the iterative actions of individual behaviour Opportunities do not exist until entrepreneurs engage in the opportunity process
Opportunity process	Opportunity process is linear, rational, purposeful, and systematic , aimed at achieving given ends	Opportunity process takes place through cognitive patterns; it is non-linear and internal	Opportunity process is cyclical, serendipitous, or opportunistic, bricolage; opportunity identification and exploitation are

			intertwined
Process moderators	Past knowledge and experience	Past cognitive patterns	Past behaviour patterns
Opportunity process phases			
• **Opportunity Identification**	Identification of a need or a problem	Identification of a new situation or a possible new interplay	Identification of the consequences of an individual's actions and their experiences
• **Opportunity Evaluation**	Using resources to achieve ends (solve the problem or fulfil the need), both means and ends are known	"Connecting the dots", Correcting errors and creating new ways to achieve an end; means and ends either known or unknown	Creating new means and new ends; both means and ends are unknown
• **Opportunity Exploitation**	Opportunity identification is followed by opportunity evaluation, which is followed by opportunity exploitation	Opportunity identification and evaluation are intertwined and followed by an exploitation phase	Opportunity identification and opportunity evaluation and exploitation are intertwined

Modified from Kyrö et al. (2011)

The proposed division corresponds, to some extent, to that noted by Ardichvili et al. (2003) when they argued that the term "opportunity recognition" has is too narrow in its formulation. According to the authors, opportunity identification may take the form of 1) sensing or perceiving market needs and/or underemployed resources, 2) discovering a match between particular market needs and specified resources, and 3) creating a new match between separate needs and resources. Similarly, for Sarasvathy et al. (2003), the difference between recognizing, discovering, and creating is drawn from three streams of economic literature pertinent to entrepreneurial opportunity − that is to say, the market as an allocative process, the market as a discovery process, and the market as a creative process. We assume that the phases of identification, evaluation, and exploitation are present in each of the opportunity processes − searching, discovering, or enacting − but they are different in their outcomes.

Thus, to better understand how entrepreneurs experience the opportunity process from idea generation to exploitation, we need to know how opportunities are identified, evaluated, and exploited and the relations between these phases. Each of our approaches represents different identification and evaluation phases, but none of the approaches is able to recognize how opportunities are exploited. Only the action approach assumes that the phases of identification, evaluation, and exploitation are all intertwined. Thus, to better understand the whole opportunity process, we propose finding a way to investigate all phases of the opportunity process together. This is the guiding principle underpinning our methodological choices.

4. Methodology

4.1 Overview of the methodological choices

A multiple, longitudinal case-study approach enables us to deepen our understanding of different ways of experiencing the opportunity process, since it aims to understand the dynamics present

within individual settings. It allows us to investigate particular contexts in depth, promote the emergence of new ideas or new interpretations of existing ideas when existing theory seems inadequate, and understand why and how answers are needed (Aaltio-Marjasola 2002, Eisenhardt 1989, Rowley 2002, Yin 2003). Here, we expect to enrich our ideas about the dynamics of the opportunity process in terms of identifying, evaluating, and exploiting opportunities and their interrelations within the process of becoming an entrepreneur.

In order to follow, retrospectively, the entire opportunity process, we reproduced this process through a documentary videography and editing method and analysed specific paths in terms of sequences, critical incidents, and events. The editing method has its origins in the relatively novel domain of videography, which, in turn, has evolved from documentary filmmaking and visual anthropology (Carroll & Choi, 2008; Belk & Kozinets, 2007; Kozinets & Belk, 2006). The use of videography is still rare or even nonexistent in entrepreneurship research, but has recently been used, for example, in consumer research (Valck, Rokka and Hietanen 2009). The editing method allowed us in each case to inductively identify sequences and critical incidents and events within the opportunity process and to maintain a logical continuity between them.

Finally, since, as argued by Aaltio-Marjasola (2002), a case study is connected to previous theories, we checked whether our observational realm might support our theoretical construct by implementing pattern-matching logic to deductively compare the reconstructed opportunity processes to the three different theoretical approaches. We propose using pattern-matching logic as a general analytic strategy, where events are explained when they are related to a set of other elements.

As Pauwels and Matthyssens (2004, 128) argue, the architecture of an elaborative, multiple case-study design is built upon four pillars – theoretical sampling, triangulation, analytical pattern-matching logic, and analytical generalisation − as a basis for validation through juxtaposition and iteration. By modifying this architecture, we next describe our theoretical sampling, then discuss how we conducted the videography and editing method during the data gathering and analysing phases, and, finally, we focus on how we employed analytical pattern matching logic and analytical generalization in the case study.

Figure 1. Methodological framework
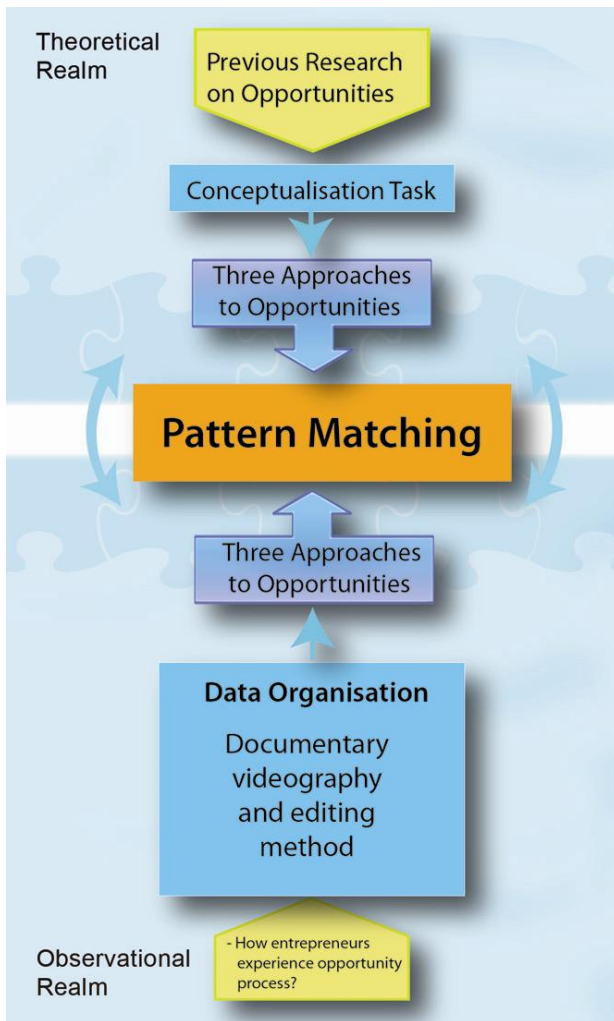
Modified from Trochim (2006)

4.2 Theoretical sampling

For theoretical sampling, we chose an information-oriented selection of the cases in order to obtain as rich and profound an array of information as possible (Flyvbjerg 2006). Entrepreneurs were chosen based on their differences in order to achieve a range of diversity within these multiple cases (Yin 1994, 2003). The main criterion was that they all had established a business venture based on a unique business idea and had run their respective businesses over an extended period of time. The entrepreneurs differed in their business ideas, age, life and professional experiences, and backgrounds. Thus, we ensured that they had experienced all phases of venture creation. As a result, we interviewed four entrepreneurs and video filmed the sessions.

Powerkiss is a company that produces charging rings that re-charge electronic devices without any cables. It was founded in 2008 by its current CEO, Maija Itkonen, together with her business partners. PowerKiss technology utilizes principles of electromagnetic induction to create wire-free charging solutions for handheld devices. The system operates so that a device with a charging ring is placed on a surface with a hot-spot installed in it and begins to charge automatically. Powerkiss is located in Espoo, Finland and has approximately 20 employees at the moment.

Maija Itkonen is an industrial designer. She graduated from the Aalto University School of Art and Design in 2008. Maija was an industrial designer for other companies before her own new venture creation. She represents a female designer who has entered the B-to-B digital communication market with a new product concept.

O2Media was founded in 2007 by Ilkka Tiainen, who is the CEO of the company. The business idea is to offer B-to-C customers a rental car for 20 euros per day and B-to-B customers a new moving media. The names and logos of the advertising companies are written on the sides of the cars. Currently, O2Media operates in three different cities in Finland and has an office in China, too.

Ilkka Tiainen has rich international experience. He studied international trade at polytechnics in Turku. Ilkka represents a male serial entrepreneur who combined the media market and car rental business to form a new service concept.

Kaipaus is a company that produces scent dispensers which are based on a nanotechnology innovation, the nanofrago® scent core. The consumer goods containing the dispenser are able to emit a scent for a long time. The company was found by Tuula Antola, acting CEO of the company, in 2008. Kaipaus created the idea in order for people to wear scents, share scents, and create their own scent memories.

Tuula Antola is an engineer. She graduated from the Helsinki University of Technology. Tuula had been an innovativeness advisor for other companies before creating her own new venture. She represents a female entrepreneur who has entered the market of consumer goods by offering scent dispensers. She is also an example of a social entrepreneur.

Globe Hope is a Finnish design company that makes ecological design out of recycled materials. It was founded by Seija Lukkala in 2001. Globe Hope turns used and leftover materials into design clothes and accessories. All Globe Hope production relies upon sustainable development. Nowadays, Globe Hope employs thirteen people full time.

We chose to include Seija Lukkala in the case study because she is an example of a female entrepreneur within the textile and clothing industry who creates materials based on the concept of sustainable development. Through her business venture, she is realizing her passion and mission of sustainable business.

4.3 Data gathering and analysis – videography and editing method

In order to better understand how opportunity processes actually appear, we applied a documentary videography and editing method in order to obtain retrospectively reproduced opportunity process descriptions through narrative life stories. We use a documentary videography and editing method here because, in our view, it makes reflective stories more visible and introduces a unique order, pace, and rhythm to them. We obtained the stories through thematic interviews and cut them into sequences. In videography, retrospective data gathering and analysis are intertwined in such a way that each cut is chosen and placed in the storyline according to its contribution to the narrative storyline. From the point of view of continuity, each cut makes sense only in relation to the other cuts. In our case, we use the editing method as an inductive approach for arranging data and giving meaning to it.

Editing is commonly used in filming to convey the goals and aspirations of the filmmaker, but is less known for its potential for gathering and analyzing data. Since the early experiments by an American filmmaker Edwin S. Porter in the 1890s, editing has played an important role in the

making of films. The editing process can be divided into three manageable stages: pre-production, filming, and post-production. Pre-production includes, for example, scriptural issues to be considered, casting, the choice of technology, and time-tables. An artistic director leads the actual filming sessions and is assisted by a film editor. After the filming is completed, a rough cut, or editor's cut, is made based on the daily screenings. In this vain, the editor gets some idea of the director's artistic intentions. In some cases, the editor may even refine the cuts while the shooting is still in progress but, eventually, the editor's real work begins with the post-production phase. The editor may also work in close contact with the director until the end of post-production, which may last for months or even years, until the film is finalized and ready for public viewing.

In documentary film editing, sequences are treated as cuts that contain distinctive conative, cognitive, and emotional events, incidents, clues, traces and testimonies about one's life. These cuts are then chosen based on their relevance to the storyline (Buckland 2000, Cheetham, Legge and Soussloff 2003, Howell 2002, Leeuwen and Jewitt 2008). These individual event descriptions are based on intentional behaviour which, in our case, comprise a life story whose sequences we identified and analyzed in relation to opportunity recognition, evaluation, and exploitation. Each sequence got its meaning when it was cut and placed within the story. This process of retrospectively reproducing a self through narrative (McAdams, Josselson and Lieblich 2006) is at the core of our editing process.

In film studies in general, there is a debate over how much true or factual content is needed in order to make a documentary, for example how authentic a film should be and what the role of the filmmaker is within that process (see, for example, Currie 2008, Carroll 2008). In our case, we followed the classical French tradition of "montage", meaning that we simply put together or assembled the shots or footages as a temporal and contextual process from the past via the present to the future.

Our production team consisted of a director responsible for the artistic process, one camera, and one audio expert. The director was also a member of the research team. The production team prepared for the shootings by investigating in advance, for example, the locations and visibility and the sound world. In addition, a loose script was sent to the entrepreneurs prior to filming in which we explained what we were doing. We also had several discussions with the entrepreneurs to clarify their role in the filmmaking process. They all seemed to be very enthusiastic about our project. In October 2010, we interviewed four entrepreneurs and video filmed the sessions either at their own premises or at the Aalto University School of Art and Design. We encouraged participants to talk freely about their lives. We used opportunity identification, evaluation, and exploitation as loose themes to guide the interviews. During the filming, only the interviewer asked additional questions or made remarks, if they were needed. In the post-production phase, the director was responsible for the editing process.

After the filming, we organized the data analysis in several stages. At first, we organized each case inductively in chronological order to make sense of a particular entrepreneur's life as an historical process. We focused the main research interest on the stories and what they could reveal about opportunity processes. The stories were arranged into sequences in accordance with the editing method. These sequences covered various incidents and events from childhood to the present day and also the entrepreneur's intentions for the future. As a result of the final cuts, we obtained four videos approximately twenty to thirty minutes in length. The entrepreneurs are presented in the videos as they appeared during the interview, with all their emotions and aspirations, as well as the knowledge and reminiscences that they share in the form of short stories, which include sequences, descriptions, and events.

Here, following the types of triangulation proposed by Deniz (1984), we applied *investigator triangulation,* which means that several investigators examine the same phenomenon. This was guaranteed by our research team, a team of three individuals with diverse experiences and expertise. By analysing the videos, the team of researchers verified the sequences and identified the critical incidents and events from the data.

In methodology literature, events or incidents have different or even contradictory meanings depending on their ontological and epistemological origins. Traditional critical incident studies can be traced back to the Critical Incidence Technique (CIT) developed by Flanagan in 1954 for the purpose of detecting failures in human operations and learning from them. According to Flanagan, the main emphasis of CIT is on "the procedures for collecting observed incidents having special significance and meeting systemically defined criteria" (p. 327). The aim of CIT is to observe human behaviour and make inferences and predictions about it. CIT has been used, for example, in education and quality control (Holmlund and Strandvik 1999, Turunen 2002, Webster and Mertova 2007, Woods 1993).

According to Tripp (1993), there are two stages in the critical incident process, namely the production of individual incidents as they are observed and noted, and linking individual incidents into their specific context, where they are not only observed but also created.

Woods (1994) claims that critical incidents are unplanned, unanticipated, and uncontrolled "highly charged moments and episodes that have enormous consequences for personal change and development" (Sikes and Measor and Woods, 1985, 230), whereas critical events are planned, intended, and controlled (Turunen 2002, Woods 1993) educational, long-lasting events, namely learning sessions. In addition, Hollister (1996) has introduced a definition of traumatic critical incident to nursing and therapy that regards incidents as having a strong affect on a person's life and level of stress (Turunen 2002, 24).

Measor (1985) divides critical events or "critical phases" into three different types, namely extrinsic, intrinsic, and personal. Extrinsic critical events are produced by historical and political events, intrinsic events arise during critical professional periods, and personal critical events can include such events as family affairs or illness (Webster and Mertova 2007, 74-75).

Vvarious authors both agree and disagree on the reasons for and meanings of critical events and incidents. Based on the review of the definitions of events and incidents, we can conclude that the authors have the same views on the following points: first, incidents or events are produced by the respondents for the purpose of making sense of the context that they are referred to; second, they have consequences for their personal life and lead to some form of action; and, third, some of the events or incidents have a more profound effect on their thinking and actions than others. However, there are several points where the authors´ argumentation differs or is even contradictory and, therefore, we aim to bring some consistency to the discussion of how and why events or incidents occur through our own definition. It seems to be evident that the two concepts, incidents and events, are used on the same aggregate level, either as synonyms or antonyms; for example, planned-unplanned, controlled-uncontrolled, anticipated-unanticipated, and so forth. There has not been an attempt to place both concepts in relation to one another and define the causal relationship between them. In our view, a more advanced, relational definition is necessary in order to better understand the causality and the complex nature of opportunity processes. Based on our experience with the reflective, longitudinal opportunity processes, causality may, in some cases, work in two different directions simultaneously, and this makes it challenging to grasp the essence of different processes which might otherwise look the same.

In this study, we place incidents and events in relation to one another and define them as follows:

> A critical incident is a sudden moment of awakening, a flash point, a mental anchor which is triggered by perception, and an event is the cause or outcome of a critical incident. Both incidents and events are reproduced through reflectivity. An event is a cause or the outcome of an incident, but only if the original incident was critical. An incident may have happened, for example, some thirty years ago, but it only becomes critical when a significant event that is related to it takes place at a later time. Hence, incidents become critical only through related events. Incidents become critical through action.

In the documentary videography editing method, all individual cuts are significant and important and they are all chosen for their relevance to the overall storyline. However, when placed within an opportunity process framework, those events or incidents that have a profound significance throughout the entire process are the critical ones. If no such event or incident can be observed via a respective step or phase in the opportunity process, then no critical moment occurred during that phase, and hence, it is intertwined with either the previous or next step in the process.

4.4 Pattern matching logic

To check whether our observational realm might support our theoretical construct we employed pattern matching logic. We propose pattern matching logic as a general analytic strategy, where events are explained when they are related to another set of elements. We referred four opportunity processes identified from our empirical research to our theoretical framework of opportunity identification. We analyzed four videos deductively according to the stated criteria and then matched them to the patterns of the three approaches. The matching criteria were the same as used in Table 1, that is, nature of human involvement, understanding of opportunity, opportunity process and its phases, and process moderators.

In this final stage of pattern-matching, the videos were deductively addressed to the criteria used in identifying the three different approaches to the opportunity process; thus, we organized them according to the three different approaches. During this last phase, we analyzed the cuts, or sequences, as incidents or events according to our definition in order to prepare the edited videos for pattern-matching.

5. Results

5.1 Case no 1: Powerkiss

5.1.1 Identified sequences, critical incidents and events

When young, Maija Itkonen was interested in everything. She was very fond of creative games and plays, and she, for example, did experimental baking. She pursued music studies after graduating from secondary school, but decided to continue with art studies instead. When studying at the School of Art and Design, she was mainly interested in her own projects and, as she says, she wanted to have total control over her creativity. Maija remembers very well the day when she visited her university after completing her studies and realized that all the creative ideas posted on the walls in a design workshop could eventually lead to workable business ideas. She had the strong insight that each individual idea was feasible. Maija also had an idea. She had always dreamed of a

wireless world, as for her "Mobile is not mobile!" She noticed that all her appliances were dying and there was a need for a charging device that would make all devices really mobile. She began to solve that problem by looking for an appropriate technology. In order to find a solution for a wireless world, she began to study wireless technologies and contacted some experts in order to choose one. After consulting them, Maija decided to profit from well-known principles of electromagnetic induction. She remembers that it took one year to pass the first R+D phase and that, in order to succeed, she needed to surround herself with a team of skilful people. In her mind, university is a kind of creative family, and networks there open up different paths and doors if one only wants to ask for help in finding the right people with experience and expertise. Maija did not want to rely on other companies and created the ring in her company. She clearly realized that she wanted to create a brand that would embody emotions such as love. The name PowerKiss reflects her approach. Maija points out that organizing more and creating less would make life easier, at least to a certain extent, but still she will not give up her creative mindset, despite the challenges.

Table 2. Sequences, critical incidents, and events – PowerKiss

Sequences, critical incidents, and events - PowerKiss					
Pre-idea		Idea generation	Opportunity process		Exploitation process
	Critical incident	Critical event	Critical events	Critical incident	Critical events
Creative childhood and diverse experimental youth.	During a visit to the university, she has the strong insight that all ideas are feasible.	Maija notices the problem that "mobile is not mobile", thus she identifies the problem of functionality and usability for mobile devices.	She looks for solutions and technologies and makes choices between them.	Maija realises that she wants to build a charming brand with emotions, like love.	PowerKiss is founded. The R & D phase takes place, followed by commercialization.

5.1.2 Pattern matching logic

Maija falls into the search approach. Her concept was a result of identifying the problem that mobile devices are not actually mobile when they need to be attached to walls for charging. Once she had identified the problem, she systematically and rationally began to seek for solutions. However, she concentrated her efforts on choosing between solutions to solve the problem, not on looking for the solutions or creating them. For Maija, networks as such are important and not experts. She used her networks to find solutions. However, she relied upon her own skills when making the decisions.

The critical incidents in Maija's story mostly occurred as a result of thinking reflectively about a problem and finding a solution. She refers not so much to different occasions or external entities but more to her own thought process and how it changed. For example, she refers several times to how she "realized", 'thought", "wanted", "got in mind", "had the knowledge", "faith and strengths", "could control", and "was passionate". Importantly, Maija said that she had not solved the problems earlier in her career, and she had not engaged in this kind of development process before. As Maija said, this process made her an entrepreneur.

Table 3. Results of pattern matching − the case of PowerKiss

Criteria	Maija
Opportunity	Maija identified the problem that "mobile is not mobile". The vision of a wireless world and a practical solution to achieve it was identified and solved systematically by Maija and the team.
Nature of human involvement	The technology already existed, so Maija had to choose between different solutions based on their applicability.
Opportunity process	There was a constant search for solutions to create a true wireless world. When Maija was sure that there was a solution to her technological challenge, she had to make rational choices during the first year of technology development. Finally, when finding the solution to her last problem of emotional branding, she began to exploit the evaluated opportunity.
Process moderators	Maija relied on experience and the experiments done by the team members. She used networks for providing solutions.
Opportunity process phases	
• Opportunity Identification	She noticed that the current charging technology did not allow appliances to be totally mobile, since they always needed to be charged when attached to surfaces.
• Opportunity Evaluation	By using expertise and the experience of her networks, Maija chose a solution to the problems that she had identified. She relied on her own capabilities and competences to solve the problems and create the venture.
• Opportunity Exploitation	Maija combined her expertise in technology, design and business, founded the company, and began to run the business.

5.2 Case no 2: 02 Media

5.2.1 Identified sequences, critical incidents, and events

Throughout his life, Ilkka Tiainen had always looked for some strong personalities and role models and was business oriented. Among the people who first influenced him was his grandfather, who was a farmer and politician, and later he constantly found great entrepreneurs like Ted Turner to help him clarify his ideas, wants, and ambitions. At the age of 14-15, Ilkka realized that "most of best ideas come when you are almost asleep, when you switch off your body from daily activities"; however, the next day they are often forgotten. Since then, Ilkka has been writing down potential business ideas in a special blue book. The blue book served as a cognitive "training guide" and source of ideas for how to make things better. He says: "If I see that something is wrong and I can improve it, I write it down." Ilkka is prone to improve upon already proven ideas and uses his blue book as a data bank (it contains at least 150 business ideas). Ilkka is not attached to any single idea and is confident in his opportunity process, but finds it more difficult to implement his ideas. He noticed that timing and improvements are important parts of idea generation.

As a seventeen year old, during the Internet boom, he tried to set up a computer business, but it did not succeed and he went back to school. Ilkka also took over the farm from his father as a young man and sold it after four years. Since his childhood, Ilkka had lived abroad for many years. In Austria, he became familiar with the idea of how moving media works in practice, where a customer could rent a car with just one euro. But he was not convinced that this included all the costs that customers would have to bear at the end of the day.

While working in Germany, due to disappointment with his business partner, Ilkka realized and also decided that he did not want to work for somebody else and came back to Finland. He was wondering what to do and began to go through his blue book very carefully and picked-up an idea that was highlighted in the book. He decided to combine low-priced car rental with moving media in a new, innovative way. His observations in Austria regarding moving media were very influential and inspiring. They enabled him to improve and adapt his idea to fit a new environment (Finland). In the B-to-C concept (cheap car rental), he had to optimize the rental price per day for the target groups, and with the moving media concept he improved the taping system and improved the tracking system in order to better convince the marketing agencies of the usability of his moving media. The idea was that customers (advertisers) and customers (renters) both participated to the actual production process. He faced a great deal of opposition from potential customers and had to work hard and use his skills of persuasion to get customers interested. Cheap car rental was not difficult to put into practice, but more work and persuasion was needed to convince the marketing professionals and investors that moving media is a profitable business. Ilkka believes that despite the fact that he copied this idea, he made it better.

To exploit his idea, he gathered a team whose members complemented one another and which allowed him to work where he felt he was best. When working with the business in Finland began to become routine for him, he thought that he wanted to do something from the very beginning again and began to screen opportunities for building a similar business in China. Now, with making money as a goal, he works on his global vision by adding diverse improvements, for example emission-free electricity cars for his business. He is much more growth oriented. He has plans to start the venture from the beginning and conquer the Chinese markets. Despite his enthusiasm, he is willing to sell the company when "the price is right", since he is confident that he will always have ideas for starting a new business.

Table 4. Sequences, critical incidents, and events – o2 Media

Sequences, critical incidents, and events - o2 Media							
Pre-idea		Idea generation		Opportunity process	Exploitation process		
	Critical incident	Critical events	Critical incident	Critical events	Critical events	Critical incident	Critical events
Ilkka is influenced by the strong personality of his grandfather and finds other role models as well. He tries setting up a number of businesses.	At the age of 14 or 15, Ilkka realises that he forgets some of his ideas and starts to write down all his ideas about how to make things better in a blue book.	While living abroad, Ilkka comes across the idea of moving media and he writes down this idea in his blue book. He gains many international experiences in the car industry.	Due to disappointment with his business partner, Ilkka decides that he does not want to work for somebody else and come back to Finland.	He picks up the idea of joining media and the car rental business from his blue book and improves upon it constantly.	He gathered a team whose members complement one another and which allows him to work where he felt he was best.	Ilkka wants to internationalise his venture and to start again in the Chinese market. When the business in Finland started to become routine for him, he thought that he wanted to do something	Ilka starts to scale up his business. He still makes use of his blue book.

					from the very beginning again.	

5.2.2 Pattern matching logic

Ilkka falls into the discovery approach. He believes that opportunities emerge independent of his actions; all of them are feasible, so, by responding to them, he can create each venture. He combines different ideas and simultaneously evaluates their feasibility with respect to markets. He wants to be associated with something that is successful. He has a vision and wants to be like his grandfather or the entrepreneurs that he admires. In Ilkka's case, the idea generation phase and opportunity process are intertwined, so idea and opportunity thus interact with one another. He identifies and evaluates opportunity at the same time. The exploitation phase takes place once again through a discovery process. Exploitation is a natural part of the opportunity process. If one business idea does not work, he exploits the next one, as he believes that there are plenty of feasible ideas. There is no critical incident that takes place between the opportunity process and the exploitation process.

Table 5. Results of pattern matching − the case of o2 Media

Criteria	Ilkka
Opportunity	In his view, the business world is never complete, ideas are waiting, and continuous improvements are always possible. Opportunities might be found every day, since such opportunities already exist.
Nature of human involvement	Ilka is a very alert to new business ideas. He writes down his ideas in a blue book. He keeps his mind open for new ideas all the time, even when "walking on the streets". Ideas come from different sources and might even be combined.
Opportunity process	He draws ideas from everyday life, improves them and puts added value to them.
Process moderators	Famous and successful role models such as Ted Turner inspire him. For him, the key implicit driver is not the business per se, but trying to be like his idols. He constantly writes down ideas in his blue book and reflects ideas bearing in mind successful role models.
Opportunity process phases	
• **Opportunity Identification**	Opportunities are based on improvements. According to Ilkka, the business idea is not difficult to identify. It is only a matter of choosing one idea (among many feasible ones) and further developing it. He thinks that he can sell whatever there is to sell.
• **Opportunity Evaluation**	He combines all elements of the business idea in order to make it feasible. He had done careful analysis of, for example, the cost-structure, financing, customer expectations, market, and competition before he launched his concept.
• **Opportunity Exploitation**	It is not a matter of whether ideas are good or bad, but worse ideas require more work, since everything for him has already been invented in some form, but could always be improved upon. To exploit opportunities, he finds that, based on his past failures/experiences, it is better that customers already are in some form familiar with the

	idea.
	An important role at this phase is played by a team of co-workers, who have complementary competences, which allows him to be himself.
	Ilkka has a very business-like approach to opportunity exploitation; he is ready to cash in on the innovation as soon as the price is right, as the feeling of success is the most important thing for him.

5.3 Case no 3: Kaipaus

5.3.1 Identified sequences, critical incidents, and events

Tuula Antola grew up a country girl and she feels that her interests in innovativeness and entrepreneurship come from that period. She remembers climbing trees and her father encouraging her to climb higher, but not offering support when she wanted to get down, which she believes was a valuable experience. After graduation, Tuula worked as a recruiting consultant for international clients and realized that people are the core of every business. After her studies at Helsinki University of Technology, she worked as a partner in a consulting company and was involved in developing and conducting a new survey tool on innovativeness. Inspired by that survey, she started up a spinoff company, called Innobar, in 2006. She was also guiding other companies in their journeys towards innovativeness. Together with a partner, she wrote the book *Leadership for innovativeness*.

One day, Tuula attended a conference on innovation in New York. On her way back she read an article about Wunderbaums (cartoons with scent), which was a great idea from the 1970s that no one had expanded upon further, as products were still being produced on a garage-like scale. At the airport, Tuula also bought a bottle of perfume for herself and a toy bunny for her little daughter Hanna. When she came home, she gave the toy to her daughter. Hanna was delighted and said: "Hey mom, it carries your scent." Tuula was touched and realized that scent is a wonderful platform for memories and powerful moments. She combined the idea of Wunderbaum with perfumes and the toy bunny. She began to think about adding the scent to consumer goods. Discussing this idea with her business friend, she got support and inspiration about the idea that scent indeed contains huge market potential. That was the beginning of Kaipaus. She said that she needed "external signals to activate her brain" to set up the firm. They came from business, technology, and the design field. After a few consultations, Tuula discovered that her idea was feasible from a business perspective. To find the technology that would enable an item to carry the scent one loves and, thus, trigger powerful feelings, she began to talk with her friends who held PhDs in chemistry. She found an inventor who utilized a ceramic material called nanofrago. The material absorbs any added scent and releases the molecules one by one. Then, she looked around for the designers. A team of well-known Finnish designers was inspired to help her and they decided to start with a collection of jewellery in 2008. However, even though people loved the idea of goods carrying a scent, it was not easy to sell the products. According to Tuula, the reason was the unusual combination of jewellery, scent, and nanotechnology. Thus, she and her team had to teach distributors and end-users about the products. She realized that it is too much to work for a few companies and still have time for family. She decided to resign from her other jobs and devote her time mainly to Kaipaus. It enabled her to think about the internationalization of her business. She plans to enter the European Union market. She has already begun to explore the Italian market. However, she has noticed that expansion depends on people who inspire and enable others to share their ideas. She might become

a business angel in the future. For Tuula, it is important to practice the idea of Doing Good as Business Strategy, which means donating at least one euro from each product to charity. She wants to build a sustainable business story and help others.

Table 6. Sequences, critical incidents, and events – Kaipaus

Sequences, critical incidents, and events – Kaipaus							
Pre-idea		Idea generation	Opportunity process		Exploitation process		
	Critical incident	Critical events	Critical events	Critical incident	Critical events	Critical incident	Critical events
Engineering background and entrepreneurial experiences. Due to her international experiences, Tuula realised that people are an important part of venture creation	During a flight from New York, Tuula realises that scent is not commonly used in consumer goods	She matches idea of Wunderbaum with perfume and a toy bunny and begins to think about combining these ideas into one product	Tuula asks around for help and looks for the technology that would enable items to carry scents and looks at the idea from a marketing perspective	Famous designers are inspired by Tuula to design products	She teaches distributors and end-users about the product	Tuula decides to only work for Kaipaus	She has the ambition to upscale the business and go international

5.3.2 Pattern matching logic

Like Ilka, Tuula also falls into the discovery approach. She combines different ideas from technology, business, and design and simultaneously evaluates their feasibility. In terms of process moderators, Tuula bases her success on previous cognitive patterns. She is inspired by people but, in this case, these people are not role models or entrepreneurial heroes; rather, they are people around her who give her support. At the same time, she inspires people to engage in their ventures. She was provoked to enter into the opportunity process due to external signals coming from different fields and perspectives. During the exploitation phase, the discovery process takes place again. Tuula is driven by a mission.

Table 7. Results of pattern matching − the case of Kaipaus

Criteria	Tuula
Opportunity	Opportunities are generated by combing the surrounding environment - Tuula discovered that scent might be a platform for emotions and combined it with nanotechnology in order to create jewellery with a scent dispenser.
Nature of human involvement	Tuula combines memories, emotions, design, and technology.
Opportunity process	Tuula connected the three seemingly unrelated concepts of wunderbaum, perfume and a toy bunny to form the concept of products that carry scents.
Process moderators	Tuula is significantly inspired by others, like experts in particular fields. She is also able to inspire them to join her projects.
Opportunity process phases	

• **Opportunity Identification**	Tuula discovered that toys (like the toy bunny given to daughter) could carry the scent of mothers.	
• **Opportunity Evaluation**	She matched the need for goods to keep scent with nanotechnology and design. She decided to start with a collection of jewellery.	
• **Opportunity Exploitation**	Tuula worked hard to convince distributors and end-users to buy Kaipaus products. She is greatly involved in the company, but she is also ready to sell it. She pays attention to donating to charity when selling her products.	

5.4 Case no 4: Globe Hope

5.4.1 Identified sequences, critical incidents, and events

Seija Lukkala was raised in a family with a culture of doing things. In her childhood, her mother did many things, including making clothes, with her own hands and used a lot of creativity in everyday life to make ends meet. This is how Seija learned to see things through `recycle lenses`, and it was also how she was introduced to economic thinking. Her challenge was to find an alternative usage for things and be creative and do things by hand. When she was at school, she was questioned by others about her clothes, which were home-made and recycled. At first she did not like to be different, but then realized that being different is a good thing and became aware of the value of uniqueness. Hence, she began to see her different clothes as an asset. She began to develop her own ideas based on ecology and recycling, and she later combined them with aesthetics and art. She never liked school because, as she says, she was always more of an active type. In her early professional life, Seija was mostly engaged in the textile and clothing industry. After finishing school, she worked for a company that made costumes for different theatres, and, at the same time, she made seasonal design prototypes for manufactures on a part-time basis. However, in the 1990s the competition for making cheap clothes increased and Seija was becoming tired of the consumer trends within the clothing industry in general. She began to consider how she could use her expertise to act in a more ecological and sustainable way. She established her first company and took part in the yearly Vateva Fair Exhibition for big manufacturing companies during a Helsinki Fashion Week. Although she did not have any manufacturing companies as customers yet, she decided to present her collection at the fair. The positive response that she received for her collection gave her the idea that she was on the right track. A breakthrough point came when she attended a longer growth-oriented course for design companies. During that time, she finally had more time to reflect on her ideas and business concept. During the course, one of the tasks was to imagine how it would look if you were able to conquer the world. Now she understood that she had to put her full effort into her business and work 100 per cent for her goals. She began to implement social responsibility and sustainable development values within her company and combine these values with good design and quality, as well as branding. She stresses that she wanted to have an impact on people's thinking and to ensure that the company is transparent in everything it does. As she says, it was important for her to send a message to society by doing and not only by talking. Seija admits that it took her five years to struggle with everything, as "everything had to be invented". For example, she found it difficult to find an investor at the beginning, as her design represented a new segment in the market at that time. The new production process was difficult to handle, too. Her confidence in herself and what she is doing came with experience. She began to invest in R & D to have new materials and offered new products for new markets. She broadened the scale of her operations and now has 64 retail outlets in Finland and exports to nine countries. Her dream is to open a sustainable shopping centre and to expand even more in the future.

Table 8. Sequences, critical incidents, and events – Globe Hope

Sequences, critical incidents, and events – Globe Hope					
Pre-idea		Idea generation	Opportunity process		Exploitation process
	Critical incident	Critical events	Critical events	Critical incident	Critical events
Creative childhood with a culture of doing, causing her to value recycling and economic thinking	Seija realises that the clothes she wears are different than other children's clothes and gradually begins to likes that idea	Seija develops her ideas and values and combines them with aesthetics and art. She has her own company, which produces artificial fur coats.	Seija is asked to design a collection for Finnish fairs. She receives a start-up grant for a company.	Seija attends the course for design companies and has time to reflect on her ideas and values and business.	She develops her ideas by trying different materials and implementing different products. She continues to expand her business into new markets.

5.4.2 Pattern matching logic

Seija falls into the action approach. She was developing her business idea through her own actions and a process of trying. She did not recognize opportunity until she became engaged in creating it. She stresses the need for doing and practical experience. In her case, opportunities are created through constant engagement in the iterative process of developing and implementing opportunities from ideas. For her, experiencing a real action means identifying, evaluating, and exploiting an opportunity – thus, the creation of a venture. She draws satisfaction from doing things. The forces driving her are ecological ideas, creativity, and passion.

Table 9. Results of pattern matching − the case of Globe Hope.

Criteria	Seija
Opportunity	Is a consequence of getting unexpectedly engaged in preparing collection for fashion fairs.
Nature of human involvement	Seija creates opportunities by engaging in developing her business and working on her ideas.
Opportunity process	Identifying, evaluating, and exploiting the interplay of opportunities.
Process moderators	Seija bases her success on her experience and the creativity she learned at home. She is also driven by her passion for creating a sustainable world.
Opportunity process phases	
• **Opportunity Identification**	She prepared a collection for fairs and, when saw it was a success, she further developed her idea for ecological and recycled clothes.
• **Opportunity Evaluation**	She creates new materials and new products and enters into new markets. When they are ready, she begins to work on new ones.
• **Opportunity Exploitation**	

5.5 Analytical generalisation

According to Yin (1994), the purpose of a case study lies in its analytical generalization. As Pauwels and Matthyssens (2004) write: "through analytical generalization an investigator aims at testing the validity of the research outcome (that is, a theory) against the theoretical network that surrounds the phenomena and research question". Thus, the case results need to be compared with a theoretical proposition. In our study, we made use of three approaches to opportunities theory as a template for comparing the empirical results of the case study. In an effort to validate our concept, we used juxtaposition and iteration.

According to our findings, opportunities evolve during the process of becoming an entrepreneur. They emerge from ideas, and their antecedents might be found in the childhood or youth of the entrepreneur. We called this period the pre-idea phase. The way in which the opportunity process takes place differs with each person. The particular phases of the opportunity process intertwine and there is no one universal opportunity process path. It depends on human involvement, which may concern evaluating alternatives and making choices, using cognitive abilities to 'connect the dots', or interpreting the consequences as a result of action-based experience.

We cannot discuss opportunity identification or the recognition of opportunities without also including the exploitation phase, as the different phases of the opportunity process happen to be intertwined and difficult to separate from one another to fit an abstract model. For example, in the case of Maija the phases of the opportunity process proceeded one by one, whereas in the case of Illka the identification and evaluation phases interplayed with one another and in case of Seija they all took place at the same time. Moreover, in each case each of the phases had its own meaning. However, analysis of the cases validates our three different approaches to the opportunity process. The match between the theoretical realm and the four cases on becoming an entrepreneur indicates that it is possible to identify three different approaches to opportunities and the opportunity process, thus validating their basic differences; that is to say, it is possible to understand opportunities, their processes, the process moderators and their phases, and the nature of human involvement. And, most importantly, the cases show that the differences in the identified approaches lie in the variety of human involvement.

6. Conclusions and implications

Our aim was to better understand how entrepreneurs experience the opportunity process by studying their different venture creation processes. The starting point was an assumption that venture creation is a path of sequences, including critical events and critical incidents. To achieve our research aim, we developed three approaches to the opportunity process. We did this first by identifying the differences in the understanding of opportunity and its process as well as the differences in the nature of human involvement. Then, to track venture creation over time, we followed four cases of how opportunities evolve in the process of becoming an entrepreneur and applied a critical incident and events technique, which is based on moments and episodes. Both critical incidents and events have an impact on venture creation. We used videography as a research method as a means of providing stories. For each case, we identified critical incidents and tried to distinguish the critical events of venture creation. Each time we recognized different phases of the venture creation process and uncovered the relations between them. Then, by adopting pattern matching logic, we investigated how our four cases might support our theoretical construct. The result of that process is a validated three-approach construct of the opportunity process and some suggestions of how particular phases of that process are interrelated. Our claim regarding the diversity rather than the uniformity of opportunity identification processes has proven to be quite valid. There is no universal opportunity process path, no universal phases to the opportunity

process, and no universal process moderators, either. A different understanding of opportunities implies a different understanding of opportunity identification, evaluation, and exploitation.

We also discovered that successful ventures contain a reflective practice. Through these reflective practices, enabled by recreating the venture creation process, it was possible to identify critical incidents and events.

The study has its limitations, especially in its methodological aspects. In our methodology, we decided on pattern-matching logic, and, to recreate entrepreneurs' stories, we used videography. Both concepts are novel in entrepreneurship research. However, given its usefulness in other research domains, we adopted pattern matching without knowing the full extent to which methodological problems might be associated with it in entrepreneurship research. Hence, future research on entrepreneurship should make use of this strategy to prove its applicability. Also, the use of videography is still rare or even nonexistent in entrepreneurship research.

For future research projects, we will consider creating new videos and including our current research findings, and, thus, highlighting the critical incidents and events in entrepreneurs' lives which might be further used for educational purposes.

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