

# **Master Thesis**

**The role of emotions in creative thinking and innovation**

*Cand.Soc. Organizational Innovation and Entrepreneurship*

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*Total Character count: 139.805*

*Total Page Count: 74/79*

*15th of January, 2018*

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## **ABSTRACT**

In this paper, creativity nature and its underpinnings are examined thoroughly. It is an essential phenomenon product of humans mental processes, crucial for personal and social development. Similarly, this project also explores the crucial role that emotions in human behavior, and how they may influence creative potential and performance. I have attempted to collect the most important knowledge developed up until today in order to provide with a valid framework for the comprehension of both concepts and its implications at the individual and at the group level.

All the knowledge acquired along the study of these domains is put into practice through the application of the theory to a real case based on a professional challenge and opportunity. In order to accomplish that goal, I have reflected on my experience by using an autoethnographic style.

# INTRODUCTION

## ***1. Problem statement***

*“The society has been forced to impose outside rules to content the overwhelming stream of emotional excess that comes up from individuals.” (Freud, 1930)*

Contemporary life is characterized by the multiple variety of interrelations and complex systems that conform our culture and society. The sophistication of the economic system in which we live is possible thanks to the advance of science and evolution of rational thinking. However, human beings are not purely rational, as the human brain is also composed by an emotional system inherited from our animal ancestors. Being the most ancient part of the brain of any animal, its development arises as consequence of the fight for survival and before there could be any consciousness aware of its existence. A primary function of emotion is, therefore, to provide a signal to the organism that a stimulus or event may be relevant for present or future survival or well-being. This task is carried out by the survival circuits, that detect significant stimuli and trigger certain behaviors in the presence of different circumstances. (LeDoux, 2015)

Emotions are unconscious affective responses to relevant stimuli. They are constantly present in every individual. When the person interacts with the environment, an affective response is elicited. The final outcome of this reaction results from the evaluation of the situational demands and the resources at hand. The response elicited influences the following sequence of events, so both the individual response and the conditions of the environment are influenced.

On the other hand, creative thinking developed along with brain development, since our ancestors had to figure out new ways of surviving against predators and negative atmospheric conditions. In their evolution, humans have learnt not only to be creative so survive, but also to even adapt the environment conditions to their needs. The advance of science, as well as many

other aspects of human life such as art or entertainment, are also result of creative thinking and performance. Creativity is grounded in everyday capacities such as the association of ideas, reminding, perception, analogical thinking, searching a structured problem-space, and reflecting self-criticism. It involves not only a cognitive dimension but also motivation and emotion, and is closely linked to cultural context and personality factors (Boden, 1998).

It seems that technology and science have evolved as fast as the knowledge about unconscious processes and emotions have been left aside. Problems that arise from our incapacity of understanding social or personal situations are constant in our everyday life. We all face these issues repeatedly and one of the reasons for that is that we are not able to manage our resources in an effective way. Our ignorance about up to what point we can have influence over our minds potential by taking conscious control of the situation has limited our actions up until very recently.

Traditionally, we have grown in a society that potentiates and positively rewards rational and structural thinking rather than intuitive, creative and diffuse thinking. The social model that guides our learning, demands the development of certain intellectual skills that do not leave room for a very imaginative way of living. There are numerous and different opinions about the causes of it. For example, that it might be caused because rationality gives rise to logical understanding and certainty. It is also possible that we choose rationality in order to avoid the insecure path of creation, so we save energy by repeating already existing patterns. Another reason could be that it is easier to control people and resources by limiting creative capacity of the individuals, so the crowd becomes more homogeneous and easily manipulable.

Parallely to the overall and standardized modernization of the Modern Western culture, it has taken place a phenomenon characterized by the great emphasis on the individual and the priority on developing high self-esteem. This way of perceiving the world around us makes people think that we are separated from the rest of the world, that each one is alone and independent from the rest, that every individual is different and therefore we should think and act by ourselves, as independent unities. Besides the evident mistake is thinking that we do not

depend on other people and resources, this philosophy taken to the extreme leads to the belief that all what we see, feel and perceive is the only true reality. This position neglects the possibility of considering other people's opinions as valid as ours. It denies the role of the observer as the main constructor of the reality and, therefore, limits the individual's capacity to influence the ongoing chain of events. This leaves people in a frustrating position, where the actor expects to achieve certain goals by approaching problems incorrectly, due to a misconception. People tend to pay more attention to the world of outside by deviating it from self-reflection, so the causes of the circumstances are to be found somewhere else.

Modern science, however, have demonstrated how important is to be aware of the concept of interconnectedness and how we all are a small part of it. There is also scientific evidence of how change is a constant in the universe at any scale, so it the concept of static and solid become obsolete in an universe that on movement. (Capra, 1975)

*“The key concept being that the forces holding particles together are themselves particles exchanged in the cross channels”* (Capra, 1975)

As we aim to understand our world and life in the mess of interconnected systems, we tend to scheme and simplify the complexity by labelling and categorizing concepts. We try to summarize and generalize in order to understand better and use the resources efficiently. Humans even tend to set limits to things that have not or take them for granted, or that were not constrained until then due to ignorance or lack of preparation. This progressive adaptation also influences our capacity to be creative, since the cognitive skills needed for that are not trained and become obsolete.

My purpose in these pages is to make the reader realize that we can re educate our brain to be creative again by understanding how it works and by training the skills required for creativity.

Thus creative performance has a broad range of applications since every human being can perform it in many different ways and scales. We can be talking about creativity in concerns to

the field in which that performance may have an effect, for instance in our daily life or creativity in a more artistic way. We can also differentiate creativity by the kind of skills we use to perform the activity, such as psychic or intellectual.

## ***2. The case***

In this project, I will analyse how emotional intelligence can influence creative performance based on a personal experience. My intention is to apply all my experience and knowledge about how to overcome professional challenges by progressively taking control and advantage of my emotions and creative potential. I will put emphasis on the mental mechanisms involved in creative thinking and on how we can access them and manipulate them consciously in order to develop creative outputs and integrate them in the environment. I will also reflect on the feedback that all that had on me.

The explanation will start by how I firstly learned about myself and will finish at a point in which I am given the opportunity to teach and help other people become more creative in the professional environment thanks to the experience acquired.

The case is based on the progression of my professional career in the last two years. There are three different critical moments in which I encountered three different challenges that I ended up overcoming creatively. Following each experience, I will also elaborate on the skills and knowledge acquired by facing the situation and how that new scenario formed the background of new events and changes.

I will expose my experience as an employee of the company Sandemans New Europe. This company is a multinational organization leader in its sector whose activity is the promotion of walking tours around the main capitals of Europe, US and Middle East, in the sector of tourism. It is the creator of the concept “Free Walking Tour”. The company works with freelance guides

who pay the organisation for the promotion of their services. Despite its big size and popularity, it operates locally and independently in every city and has been running since 2003.

My role in this company has changed a lot since I first started as a part-time worker in Copenhagen, at the same time that I started OIE Masters degree at CBS, in autumn 2015. The company in Copenhagen worked pretty much as a startup with only 2 employees in the beginning plus the team of 15 freelance guides. Nowadays, after having been promoted twice and moved to Berlin, I am part of a managerial team in charge of 15 employees and 70 freelancers.

Changes have been fast and I have gone through a lot of new situations that I did not know how I was going to handle. After 2 years I am happy to see how I have progressed not without going through a lot of stress due to time pressure and workload. I will try to explain here why I think the key of my success in overcoming those challenges relies on learning to manage my own personal resources, meaning by that my own emotions.

### ***3. The objective of the study***

Due to the difficulties of this period, I used to write as a method of reflection and meditation. Reading what I have written in the past has always helped me view things with more objectivity and from a different perspective. This method has allowed me to get a deeper knowledge about how I feel and how to manage my emotions, in order to put them to my own service.

I have focused on creativity because after two years of learning all about Organizational Innovation, it is clear to me the great importance of creativity in everyday life. It is a basic human characteristic and main means to progress and evolution involving activities not only concern breakthrough ideas but also small actions which enhance and enrich our lives but that rarely catch the attention of others. However, even though it is present in all aspects of our life, we have very little knowledge about how it works, which factors influence it and up to what point we can have a conscient influence over it.

All in all, this seems to be the perfect context into which I can apply all the knowledge acquired up until now, in order to give some light to the sometimes complicated professional path. With this case-based study I analyse the development of my creative potential through the progressive learning about its brain mechanisms, with particular focus on emotions.

***Research question:***

Does emotional management foster creativity ?

# LITERATURE REVIEW

## *Creativity and emotions*

Creativity is usually defined as the generation of ideas, insights, or problem solutions that are new and meant to be useful (Amabile, 1983; Paulus & Nijstad, 2003; Sternberg & Lubart, 1999). The concept ultimately involves the production of original and potentially workable solutions to novel and ill-defined problems of relatively high complexity (Scott, Leritz and Mumford, 2004)

Due to the complex nature of the concept and its presence in every aspect of human behaviour, the research on the field of creativity has been extensively addressed from multiple domains and angles. There is a wide body of research with emphasis on different characteristics., causal and consequential aspects, thus the approach from which to define the concept depends on the goal of the researcher and the criteria chosen for the study.

The P's of creativity are the general categories of the extensive research on creativity done up until today: person or personality involves the analysis of psychological patterns present in creative people; process defines mechanisms common to all creative behavior; product occurs when creative performance is evaluated from the output point of view; and place, that studies the influence of the environmental aspect. All the concepts will be developed in depth along the literature review. However, more recent conceptualisations have added other two concepts:

Since creativity has to be recognized by others as such, it implies that creative performance will make a difference and that people who evaluate it will recognize its novelty. Therefore, persuasion has been recognized as another component of creativity, and can be seen as a subcategory of personality in relation to place. Likewise, potential is the likelihood of a context

to derive into something highlighted as creative, thus also depends on the creator and on the situational context in which creativity is implemented.

All of them are interrelated concepts which cannot be analyzed isolatedly since they all belong to the same phenomenon. A description of creativity will never be complete without the combination of concepts from all perspectives.

## ***1. Theory categories***

The Cambridge handbook of creativity, by Kaufman, J. and Sternberg, R. (2010) proposes the following categorisation:

- Developmental theories: The studies included in this category follow up the developmental background of individuals that end up being recognized as creative. It focus the study on the transformation of ideas into products. It analyses the person, place, and potential aspects of creativity.
- Psychometric theories: These studies are concerned with the valid and reliable measurement of creative products, with the goal of establishing an objective framework that serves as reference to the rest of lines of research.
- Economic theories study the phenomenon from a point of view that involves interaction with the environment. This macro-level framework makes possible to create a context in where the individual takes into account loses and gains of being creative. Basically, the creator studies the benefits of being creative and showing it to the rest of the world. The costs and gains could be personal or social, depending on the comparative scale. Therefore the main focus is on the interaction between the environment, the person and the potential of creative behavior.

- Stage and componential process Theories: This kind of theories approach the creative process sequentially and differentiate several stages, from the beginning to the end. Linearity has been criticized repeatedly and modern theories recognizes that verification usually takes creators steps backwards if the solution does not meet expectations. These theories argue that creativity works as an iterative process whereby an individual may cycle through the stages multiple times, in various combinations. Perhaps the reference framework in this concern is Wallas' theory, that distinguishes the following stages: preparation, incubation, insight and verification. Following theories after him have specified the preparation stage: the problem is firstly identified and right after defined. Similar empirical delineation has been directed at incubation, insight, and verification, the last of which is sometimes broken down into valuative and evaluative processes. It is important to add at this point, that this does not consist on an isolated process, and therefore it is influenced by the course of time, the interaction with the environment and the affective state.
  
- Cognitive theories look at the creative process from a neuroscientific point of view. They try to reveal the brain mechanisms common to all creative process. Since creative process involves such a wide array of neural interactions, cognitive theories about creativity are quite varied, depending on the conceptual focus: attention or memory, individual differences, conscious operations or unintentional processes, etc. In this context, associative theory has received special attention since it studies up to which point creative people may have a more tolerant or open criteria for idea association and find patterns among concepts, and openness to change in the sense that they can easily change their minds . Actually, one of most interesting discoveries of neuroscientific research in the last years, relies on the ease of manipulation and change of our brain structures, that is, the individual ability of each of us to influence the brain structure, by strengthening or margining different cognitive abilities.
  
- Another line of research brings concepts and interpretation upfront. The way we construct reality is formed by the meaning that each one of us assigns to concepts, relate

them to our past experience and explore the potential of their implication. Our associative memory is in charge of priming, that is, the unconscious identification of concepts and their meaning, by activating particular representations or associations in memory, just before carrying out an action or task. This unconscious mechanism of human memory is present in all aspects of our life and is easily manipulable. New mental constructions result of this mental process open up the possibility new points of view, by focusing attention on other details up until then overpassed. In addition, metaphoric logical is another cognitive tool that consists on the capacity of placing knowledge of different a certain field into a different one, that may bring up promising possibilities. Last but also important, there exists a wide array of techniques based on metacognitive processes development, which are entirely under conscious control and often induce creative thinking too, for instance tactical thinking.

- Theories Based on Problem Solving and Expertise: This kind of theories, drawn primarily from cognitive psychology, emphasize problem-solving processes and expert knowledge. Expertise influences performance and cognition significantly in the area of information processing. When an individual is specialized in certain domain, cognitive processes are faster and more automatic. The person remembers domain-relevant patterns better and tends to generate more effective problem representations. The expert also typically engages in efficient forward reasoning in problem solving, rather than laborious backward reasoning.
- Evolutionary Theories: There are also other theories of creativity that researchers have proposed drawing on ideas from evolutionary biology. These models aim to understand the nature of highly creative achievements taking into account all of the P's of creativity and taking individual differences in creative potential as a starting point. On the basis of this theory, Simonton's Darwinian model distinguishes s a two-stage mental process composed of blind generation and selective retention, and the elaboration of ideas phases. (Campbell, 1960).

- **Typological Theories:** Another approach is the categorization of typologies of creators, who differ in systematic ways. Here we focus on a recent typology by Galenson, whose theory encompasses two very different levels of analysis: macro-level career trajectories and micro-level descriptions of creators' working methods. Seekers are the type whose achievements are the result of their perseverance. In contrast, finders frequently make detailed preparations and clearly know their goals at the outset.
- **Systems Theories:** The theories that share this view, understand creativity as a complex system composed by a net of interactions, all of them interconnected. Those interactions can be considered under very perspectives, from the neurological level through cognitive mechanisms, to a more abstract approach, in the form of associations and categorisations. Systems theories take a very broad and often quite qualitative contextual view of creativity. In this sense, the focus is less on the particular static concepts themselves, but on the fit into the context of all the components that affect the potential or production of creativity. It involves an individual creator's goals, knowledge and reasoning, as well as larger social forces and creative paradigms.

Even though there are several perspectives from which we can analyse creativity and study its characteristics, I have approached this project by selecting only a few of them, taking into account how relevant are those points of view to my analysis.

## ***2. Creative process***

Creativity is a process rather than as a static concept. Change is crucial to creativity and it cannot occur if there is not difference between the input and the output. The analysis of creativity from a processual perspective accounts for the chain of reactions that occur from the reception of the stimuli to the production of a response.

There are two ways of approaching creativity as a process. Part of the research attempts at finding brain mechanisms common to all creative behavior and the sequence and relation of the cognitive abilities components. (Kaufman, J. and Sternberg, R., 2010)

Another line of research aims at identifying different stages through which creative thinking operations go. Mumford and his colleagues identified eight core processing operations: problem construction or problem finding, information gathering, concept search and selection, conceptual combination, idea generation, idea evaluation, implementation planning, and action monitoring. ( Kaufman, J. and Sternberg, R., 2010)

There are also other psychological approaches which summarize the phases of creativity in four categories:

- Preparation, or initial phase of preliminary work in which one collects information related to the case. This phase is important since the individual needs to know what is already existing and what are the possibilities of being creative in that area. Information collection helps acquire the base for creativity as well as stimulates cognition, although it may also interfere negatively in the production of new associations.
- Incubation refers to the phase that assembles the connections, when the information is internally and unconsciously ordered. The likelihood of having novel associations may be influenced by several cognitive variables: the organization of an individual's associative hierarchy, the strength and structure of associations invoked by a given concept; the number of associations the individual has to the relevant elements of the problem; and the individual's cognitive style, including the selection of the creative combination.
- When those combinations emerge into consciousness, the process enters the insight phase, which is subjective experience of having the idea. Ideas o new combinations may emerge as simple incremental changes or radical changes that affect the global understanding of the concept.
- Finally, verification is the phase where the idea is evaluated first in comparison with situational requirements and, if valid, gets implemented as the definitive solution. The degree to which a product is novel is a function both of how different is from prior work and the audience's prior experiences.

Related to this structure, theories about innovation also divide the phases into similar categories. Tim Brown describes in his book what he calls “the three spaces of innovation”. He explains how “design thinking process” is very complex, and there is no specific, guided, step by step way to do it. He rather sees it as a “system of overlapping spaces rather than a sequence of orderly steps”. His categorisation is closely related to the stages distinguished in the creative process, although with a stronger focus on practical implementation.

### ***3. Measuring creativity***

Creations are product result of creative performance, are an objective and measurable starting point from which researchers can base the cases of study. This aspect allows them to make comparisons and create categories from where making objective conclusions about the phenomenon. A downside of using this point of view is that the research does not take into account potential creators who have not produced anything yet. (Runco, 1996).

Traditionally, creative products have been divided into little-c and Big-C. There has been criticism regarding this limiting dichotomy and other intermediate categories have been proposed in a trial to mind the gap between both, such as the mini-C and Pro-C categories, by Kaufman and Beghetto, 2009.

In order to find a common framework on which base our understanding about creativity, we must find ways of measuring the phenomenon. First of all, it is important to distinguish the different types of thinking depending on their structure. Guilford's (1968) SOI model, talks about the distinction between divergent and convergent thinking that is used in studies of creative cognition. Divergent thinking implies that the result of the cognitive process results in more possibilities than the starting point. The process facilitates the multiplication of options with the goal of creating choices. Oppositely, convergent thinking is a selective mental process whose purpose is concluding on a final idea or answer, among a wider array of possibilities.

Empirical evidence accrued over the last 50 years agrees upon three distinctive characteristics of creative thought or performance in its first phase, which is about opening up associative possibilities by creating options, that is, divergent thinking. Those characteristics are fluency, flexibility and originality. (Scott, Leritz and Mumford, 2004)

Fluency is understood as a quantitative aspect of creative production that refers to the amount of responses elicited. Originality is the measure that determines the uniqueness of the response in comparison to the reference context. Both aspects can be influenced by flexibility, since it implies the array of different cognitive angles from which interpret reality or resolve the problem in question. That is, the more sources or points of views one counts on, the more ideas overall. It also measures the inclusiveness of the categories used for idea generation. The capacity of making remote associations, (associations between concepts from very distant or different categories) gives rise to an increase of variety potential. Cognitive flexibility can thus not only be seen as a measure of creativity but also as a precursor of the production of many and original responses. (Scott, Leritz and Mumford, 2004)

However, in addition to cognitive flexibility, in-depth exploration of a few cognitive categories also influences creative fluency and originality. Expertise in a field increments the fluency potential of ideas within a few categories due to the deep understanding that the individual possesses of the subject. Perseverance will manifest itself in spending longer time on the task as well as a high focus on a few categories. The consolidation of knowledge that expertise provides, simplifies the understanding of a topic, and frees the mind to develop new associations. (Rietzschel, Nijstad, & Stroebe, 2007).

Nevertheless, convergent thinking is a determinant capacity of a creative mind at the last phase of the creative process. This cognitive ability is crucial for the refinement of responses and the elaboration of solutions meaningful to the context demands that are to be implemented for sorting the problem out. (Scott, Leritz and Mumford, 2004)

#### ***4. Enhancing creativity***

There have been numerous approaches to enhance creativity that are focused on two main aspects: environment and conditions for creativity to be tolerated and fostered, and direct influence on the individual so that it is possible to acquire or develop creative capacities. After an exhaustive analysis of 70 creativity training studies, Scott et al. 2004 conclude that a basic understanding of the underpinnings of creativity in combination with real practice is a very effective way of enhancing creativity. It is important that the person that aims at becoming more creative, understands what it is and how the whole process can be influenced, in order for them to become familiar with the components and believe in their effective manipulation. The neurobiology of creativity plays an important role for eliminating the belief that a person is not creative, through understanding that all humans have a physical potential for being creative, but it is also used to teach how to train that ability through the introduction, explanation and exploration of creative tools. (Onarheim and Friis-Olivarius, 2017)

First of all, it is important to understand how human brain works and up to what point its structure is manipulable without medical intervention. One of the most important discoveries of the last century in the neuroscientific field states that human brain is plastic, that is, individuals' experiences reorganize neural pathways in the brain. Brain is in constant change and restructuring at different levels, so the use we make out of it will determine its structure too. This important statement means that an individual can train the brain by strengthening or weakening different neural paths. In the case we are concerned with, creativity can be trained, so that it is not just a matter of talent or expertise, but also a matter of belief or attitude. (Kaas, 2002 and Punset, 2010)

Secondly, the effectiveness of the creativity training relies on the understanding of the underpinnings of brain mechanisms necessary for creative thinking and performance. Some examples of that are the cognitive processes implicated in creative thinking such as those linked to ideas generation, problem finding and concept combination. The understanding how the brain makes associations and how differences at the level of information processing (both

internally generated and externally perceived) can affect creative ability. (Valgeirsdottir, Onarheim and Friis-Olivarius, 2017)

In his review of numerous creative training styles, Scott concludes that the most effective technique is a long and challenging training where various cognitive domains are integrated, as well as several problem-solving approaches and their influence on the overall creative performance. He also suggests the practice on real-world cases. (Scott, 2004)

## ***5. Human brain***

It is also possible to focus on the personality of the individual performing creativity with the intention of finding patterns present in creative people, but that are not found in what is considered “non creative” way of thinking and behaving.

Individual creativity is a function of intellectual abilities, knowledge, style of thinking, personality, motivation and the interaction with the environment. (Hasenclever, Lopes and Paranhos, 2008) All these components define the personal potential to be creative. It is important to highlight that creativity is domain specific, thus specific to an area of activity. However, in order to know about the variability potential of personalities and behaviors, it is necessary to have a clear idea of what all human brains have in common.

### ***5.1 Brain basics***

The way our brain has evolved along the history, gives us some trace of how our mental processes work. Human beings are not purely rational, as they also have an emotional brain whose mechanisms are inherited from our animal ancestors, that was developed when those beings had to fight for survival before they could even be conscious about that. Emotions involve relatively primitive circuits that are conserved throughout mammalian evolution, being the amygdala the main representative. (Punset, 2010)

A primary function of emotion is, therefore, to provide a signal to the organism that a stimulus or event may be relevant for present or future survival or well-being. This task is carried out by the survival circuits, that detect significant situations and control behaviors in the face of different circumstances (LeDoux, 2015). The role of emotions is purely adaptive, since it seems to activate our motor system quickly in the presence of a threat. (Punset, 2010)

Neocortex, which increases its size and therefore the neural connections and possibilities of action along the evolutive animal chain, is the organ that rationalizes the information. It evolved after the amygdala, and this makes the stimuli information take a longer path until it is processed. It produces conscious thoughts trying to make sense of the reality we are living, making connections between causes and effects and basing the comparisons on the experience of the individual.. (Punset, 2010)

Relevant stimuli are first processed by the amygdala, over which we do not have conscious control, and which triggers involuntary reactions and body states that we might not want to experience. People's subjective experiences to this constant flow of stimuli are emotions, which arise from cognitive appraisals of events or thoughts determined simultaneously by perceiving environmental demands and personal resources. They are not controlled consciously, but involuntary. They are normally categorized as positive or negative, depending on how they are processed and the behavioral response they elicit, although there are many variants within these two categories. (Punset, 2010)

At a physiological level, arousal involves all affective processes present in the organism, and is the basis for emotional responses. When the person reacts to the environment, an affective response is elicited. The final outcome of this reaction will result in a behavioral response, which depends on the context of the situation and will determine the direction of next reactions of the chain, so both the individual response and the conditions of the environment are influenced. (Punset, 2010)

## *5.2 Information processing*

The amount of information people is exposed to is enormous, yet our processing capacity is limited. The way in which options are represented in the brain can have a dramatic effect on decisions. A recent review of value-based decision making divided the process of making a choice into 5 categories: representation of the option, assignment of value to different actions, action selection, outcome evaluation and learning. (Plassmann, Ramsøy and Milosavljevic, 2012)

### *5.2.1 Representation and attention*

Once the information enters the organism and starts to process it, the first step is the representation, which consists on processing the incoming information and whose integration on internal and external states that drive attention. Processes involved in representation need not be conscious. (Plassmann, Ramsøy and Milosavljevic, 2012)

After representing the information, attention is the mechanism responsible for selecting the information that gains preferential status above other available information. There are two different filters: bottom-up saliency filters for the: automatic selection on the low level features of the visual input and top-down control, which depends on internal and external states, goals and expectations. (Plassmann, Ramsøy and Milosavljevic, 2012)

Attention not only affects perceptual thresholds, but can also determine what is being perceived at both the object and feature model. Attention is likely to cause two forms of downstream effects on decision making: limiting the decision to fixated stimuli and enhancing the influence of fixated information. (Orquin and Mueller Loose, 2013)

According to neoclassical view of a rational Homo Economics, human make choices based on rational Bayesian maximization of expected utility., as if they were equipped with unlimited knowledge, time and information processing power. However, the Prospect theory states that subjective utility is dependent on a reference point and that people tend to strongly prefer

avoiding losses over acquiring gains. In this sense, the emotional threshold is key in the first stages of the decision-making process, it affects the stage of representation and attention allocation and the value scale that will define the relevance of the stimuli. (Orquin and Mueller Loose, 2013)

### *5.2.2 Tasks and goals*

Task context is an important factor for creativity potential. Creative performance is more likely when the task is challenging, interdependent and autonomous because those tasks motivate members' cognitive engagement. Also factors like extreme time pressure can prevent from engaging in creative thinking. (Harvey, 2014)

Actually, from a neuroscientific point of view, the effect of saliency on attention capture should also interact with tasks demands in that decision makers are more likely to attend to salient stimuli that share features with goal-related objects. (Orquin and Mueller Loose, 2013)

The motivation that the creative person has when it comes to perform a creative activity depends on the goal or task at hand. When the person is genuinely interested and enjoys the task that is going to be developed, the resources that need to be invested to carry it out will be less costly for the subject than when the action undertaken is perceived as an undesired effort, since the creative process will already be perceived as rewarding instead of as a loss. (Hasenclever, Lopes, and Paranhos, 2008)

There is always a comparison between the resources or skills that one possesses to accomplish the challenge and the level of difficulty. That comparison results in a state that influences the motivation with which the activity will be faced. When the challenge requires higher expertise than the skill set that the subject possesses or thinks that he has, that individual gets overwhelmed by the situation, determined by an affective state of high arousal in which the person feels that the task is out of his possible control. Oppositely, if the activity requires a too low expertise compared to the skillset of the person in charge of carrying it out, the level of

arousal will be too low and it will not motivate the person because it will not demand creative efforts in order to be able to solve the problem. (Csikszentmihalyi, 2004)

### *5.2.3 Skills*

Amabile's componential model sets the framework for the differentiation of three skill-related facets: domain-relevant skills or technical skills, creativity-relevant skills or knowledge of heuristics for generating novel ideas and task motivation or perceptions of one's motives. (Kaufman and Sternberg, 2010)

Individual creativity is a function of different characteristics. Concerning the intellectual abilities, a convenient approach is an unconventional way of thinking about things and proper discrimination of unimportant issues. The level of expertise that a person has in certain domain, will determine the possibilities of associating different concepts and going deep in the subject. Knowledge of a certain field provides with the technical skills and knowledge as to be able to explore and be imaginative about new possibilities. However, a high expertise in certain domain may also bring a close attitude toward new approaches if, for example, the individual has spent too much time on acquiring such knowledge. (Hasenclever, Lopes, and Paranhos, 2008)

Mikal Hallstrup, Designit's CEO proposes the term "X-shaped people" to name the people extremely strong in more than one discipline, with a mix of certain talents. The key aspect of this concept is the interconnection between disciplines, the outcome of putting to work one's different talents at the same time, being able to structure thoughts in different ways given the mindset acquired by the expertise in different fields, and finding common spaces where both can be integrated in one sole understanding. At the same time, these talented people must be confident enough of their expertise that they are willing to go beyond that.

If we compare this concept to "T-shaped people", concept defended by Tim Brown, there are clear differences. Being both based on an interdisciplinary perspective, they are different when describing the convergence of different skills and capabilities.

T-shaped people are those deeply skilled in a certain domain and, at the same time, with a general understanding of other topics and a disposition for collaboration across disciplines. X-shaped concept goes beyond that, because it involves expertise in more than one discipline and the outcome of their combination. In addition it also requires empathy and enthusiasm for collaboration and learning from other disciplines.

The way the creative person represents reality and makes sense out of the chaos, selects the elements and sees the interconnections has effects in the brain structure so that it affects the creation of new associations (Sorensen, 2006)

Creative processes can be understood as the ability to rearrange knowledge that already exists in the mind, and thus the greater the number of associations (especially remote associations) an individual has to the requisite elements of a given problem, the greater the probability of reaching a creative solution. (Valgeirsdottir and Onarheim, 2017)

#### *5.2.4 Constraints*

Creation implies the identification of an object or thought as creative and useful. Divergent thinking can be thought of as a process that leads to novelty, and convergent thinking to usefulness. Although divergent thinking and convergent thinking are separate cognitive processes, these are of equal importance for creativity. Divergent thinking is one of many components of creativity, as there is much more to creativity than the number of ideas one can produce. Creative ability is generally believed to be equally based on knowledge and analytic thinking. (Valgeirsdottir and Onarheim, 2017)

According to many authors, divergent thinking provides the foundation for creative production, as it requires ideational searching without directional boundaries. When the scope to choose is too ample and decision-maker is uncertainty about the means or goals, our brain tends to get stuck, being unable to determine whether what we choose is the best option or we should keep looking. Therefore the clarity, direction and limits of a well-defined project are vital to sustaining a high level of creative energy. (Brown,2011)

Constraints can be visualized in terms of 3 overlapping criteria for successful ideas: feasibility or functionality as to be carried out, viability as if it makes sense to develop the idea and desirability referring up to what point it is an appealing idea. Creative projects need a balance among the 3 criteria. (Brown,2011)

### *5.3 Emotional processing*

Part of the processes that determine how different associations are encoded, consolidated and retrieved in the consumers' memory occur at the unconscious level. Memory retrieval stage is an active and dynamic relearning process rather than the mere replay of previously acquired info. Affective reactions derived from past experience information may interfere with the retrieval of experience-based reaction: consumers use post experience behavior as a proxy for their liking of the experience. (Orquin and Mueller Loose, 2013)

Intense experiences evoke intense emotions and have a self-confirming means, which implies that human brain selects thoughts and feelings that confirm such state and depicts those that may contradict the current affect. That means an involuntary manipulation of memories and information, that if we do not learn to control, may even make use of our rational thinking. (Punset, 2010)

## ***6. Emotions and creativity***

The relation between creativity and emotional state is thought to be based on 3 different components: hedonic tone (whether the emotion is considered positive or negative), level of activation (intensity), and regulatory focus (whether it triggers action or not). (De Dreu 2008)

Additionally, at the neurological level there is evidence of how emotions modulate a range of cognitive functions such as memory, attention and perception via the release of specific neurotransmitters such as dopamine and noradrenaline. Mood states are highly influenced by emotions and thus also have effect on the cognitive functions that influence creativity. Cognitive activation is a necessary precondition for creativity to come about, but the

individual's capacity for complex thinking is altered in a curvilinear fashion as arousal and activation increases. (De Dreu 2008)

At moderate levels of arousal, individuals will be in a state that facilitates them to seek and integrate information and to consider multiple alternatives. However, low levels of arousal lead to inactivity and avoidance, neglect of information, and low cognitive and motor performance. At the same time, extremely high levels of arousal reduce the capacity to perceive, process, and evaluate information.(De Dreu, Baas and Nijstad, 2008)

Activating mood states drive to greater working memory capacity, basic to complex thinking, since it refers to the ability to hold information transiently in mind in the service of comprehension, thinking, and planning. Therefore this improvement of the working memory performance facilitates cognitive flexibility and the deliberate process of information combination. (Baddeley, 2000 and De Dreu 2008).

Some moods such as anger, anxiety, sadness, and depression all have negative valence. Others like happiness, elation, and feeling relaxed and calm all have positive tone. Some mood states are positive in tone and deactivating (calm, relaxed), whereas others are positive in tone and activating (happy, elated). Likewise, some mood states are negative in tone and deactivating (sad, depressed), whereas others are negative in tone and activating (angry, fearful). Happiness and anger, associate with approach motivation and promotion focus, whereas other moods, such as fear and feeling relaxed, associate with avoidance motivation and prevention focus. (De Dreu, Baas and Nijstad, 2008)

Consequently, the creative potential of the individual is determined by the attitude and capacity the person has to deal with the 3 aspects of the emotion once it is perceived. A potentially creative precursor affect state could increase cognitive flexibility by allowing individuals to be inclusive in their thinking, to switch cognitive categories, and to explore uncommon perspectives. Rationally explained, we could say that people would feel able to look for new things and take risk, since they departure from a optimistic point of view, from a secured

position. Parallely, a negative view could make the individual think (or feel) that his or her situation is problematic, threatening, and troublesome but that could and should be changed. The behavior of the individual will be oriented to prevent distraction while focusing attention on the most important information, which results in a reduced cognitive flexibility but an increase of creative fluency and originality since a reduced range of ideas may be analyzed more in depth. (De Dreu, Baas and Nijstad, 2008)

On the other hand, an affective state which does not trigger creative behavior can also belong to two different categories. The individual may see himself in a problematic situation but without the capacity to consider the existence of better possibilities, which would enhance risk aversion and stop any effort to change the situation. Also, a person in a very good situation may not be able to see any benefit in change, since that could ruin the current perfect state. (De Dreu, Baas and Nijstad, 2008)

According to this dual pathway model, creative fluency and originality may be achieved through enhanced cognitive flexibility, increased persistence and perseverance, or some combination thereof. De Dreu concludes that activating moods that are positive in tone increase creative fluency and originality primarily through enhanced cognitive flexibility, whereas activating moods that are negative in tone increase creative fluency and originality primarily through enhanced persistence and perseverance. (De Dreu, Baas and Nijstad, 2008)

## ***7. Conscious control***

In order to deal with the issues of our everyday life, we constantly make a comparison of the situational demands and our own resources. Our brain is always trying to find patterns between the current situation and something lived before, in order to be able to copy with the situation by invoking resources or strategies already used before and that proved to be useful. Those evaluations trigger certain arousal states automatically, as response of our body in prevention of a potentially threat. Those responses are elicited before we can process them

rationally. These new aroused state can be processed differently. The individual that receives arousing stimuli will process the information and elicit a certain unconscious response depending on the association made in certain context, what is called emotion. This association comes from the perception of coping capabilities for dealing with that stress, and that is what sets the limits of action. The individual evaluates his resources in order to readapt to the circumstances and to reestablish an equilibrium between person and environment. (Ralf Schwarzer, 2008)

This primary and automatic process can be analyzed rationally afterwards, when the emotional response has already been elicited, and from there the individual can make sense out of what is really happening within our construct of reality. Even though the paths that emotional responses follow in our brain are out of our conscious control, the mere fact of realizing that they are there and what is logic they follow, create a new way of thinking that may give us certain advantage next time it happens, even if it is only by speeding up the conscious response. (Ralf Schwarzer, 2008)

Phelps's et al. annual review (2014) of neuroscientific studies presents evidence of the broad range of possibilities of approaching cognitive emotion regulation as possible strategy to change emotional reactions. Emotional intelligence is the term used for such purpose and it implies four different aspects:

- Perception, appraisal and expression of emotion: ability to identify one's own emotions and those of others as well as to accurately express one's emotions to others.
- Emotional facilitation of thinking: understanding how emotions orient people toward important information and how different emotional states can induce varying approaches to problem solving.
- Understanding and analyzing emotions: meaning, progression and complexity among emotions.
- Regulations of emotion in oneself and others to promote emotional and intellectual growth.

As already mentioned, our emotional reactions are determined by the personal interpretation of the situation. A change of this interpretation may play a crucial role in shifting the emotion that resulted from that perception. Changing one's interpretation of an event, known as reappraisal, can be taught and consciously applied. As we are going to see in the next sections, the changes that an individual may undertake at a conscious level can also get to the unconscious level and become automatic. (Punset, 2010)

### *7.1 Coping strategies*

Lazarus stated that cognitive appraisal occurs when a person considers two major factors that majorly contribute the response to stress. Appraisals are determined simultaneously by perceiving environmental demands and the assessment of resources required to minimize, tolerate or eradicate the stressor and the stress it produces. (Roseman et al, 2001)

In general, cognitive appraisal is divided into two types or stages: primary and secondary appraisal. Primary cognitive appraisal classifies whether the stressor or the situation is a threat, a challenge or a harm-loss. When the stressor is perceived as a threat, it is seen as something that will cause future harm. When the stimuli is perceived as a challenge, a positive stress response is developed, because the receptor tends to see it as an opportunity for improvement. (Roseman et al, 2001)

Secondary appraisals involve the consideration of one's personal resources to deal with the stressor or the stress it produces, it refers to self-perception. It is important to note that sometimes the secondary appraisal becomes the cause of the primary appraisal. (Roseman et al, 2001)

Depending on the conclusions made on those primary and secondary appraisals, the stimuli receptor will make a decision about how to face the situation. Cognitive dissonance theory, by Festinger 1957, explains that when there is a misfit between situation demands and own resources and it is important enough as to motivate action, people have three modes of reducing it: making a change in the environment so the dissonant elements do not longer disturb the

stimuli receptor; addition of consonant cognitions so the interpretation of the situation is not as negative as it seemed to be; trivialization, which refers to a decrease of the importance of the relation between the stimuli and the person so the emotional impact is not that relevant to the person. All these coping strategies are based on attention. By being conscious of where to focus the attention, people can direct their resources to certain goals and diminish the effects of different stimuli.

Person variables such as commitments or beliefs are important when choosing a strategy to deal with the misfit, as well as the person's affective predisposition toward perceiving the world around himself, called dispositional affect. On the other hand, there are environmental variables, such as demands or situational constraints. Both person and environment variables will serve as framework of the problem (Kelly and Barsade, 2001)

Perception of the reality strongly affects the way the course of action will continue to develop. In this sense, it is also interesting to highlight the term "self-fulfilling prophecy", defined as the false definition of a situation that causes a new behavior which makes the originally false conception come true. This mistaken validity of that vision perpetuates the reign of error. Moreover, the prophet will cite the actual course of events as the proof that he was right from the very beginning. (Brown, 2011)

Drawing on Seligman's theory of positive psychology and in the context of self-perception and opportunities representation, this can also play in our favor in the sense that when the individual believes in his capacity to overcome difficulties, she will strive to reach that goal. If, on the contrary, succeeding is not even an option, the focus will not be on achieving such a goal, but on finding reasons to keep thinking that way.

Within a meta-theoretical system approach, Lazarus (1991) conceives the complex processes of emotion as composed of causal antecedents, mediating processes, and effects. Mediating processes refer to cognitive appraisals of situational demands and personal coping options as well as to coping efforts aimed at more or less problem-focused and emotion-focused. Stress

experiences and coping results bring along immediate effects, such as affects or physiological changes, and long-term results concerning psychological well-being, somatic health and social functioning.

Coping has also a temporal aspect. One can cope before a stressful event takes place, while it is happening, or afterwards. Beehr and McGrath (1996) distinguish five situations that create a particular temporal context: preventive coping, long before the stressful event occurs or might occur; anticipatory coping: when the event is anticipated soon; dynamic coping: while it is ongoing; reactive coping: after it has happened; and residual coping: long afterward, by contending with long-run effects.

## *7.2 Embracing change*

Creativity implies change and novelty. Any creation needs to be different to the rest of the things we aim to compare with and has to be considered useful by the people over which one pretends to have influence with such a change. Knowing that we can influence the structure of our brain and model it by reinforcing certain neural paths, there is reason for thinking that openness to change can become an habit for our brain.

Therefore, personality is a very important part aspect that influences the potential of creativity. Self-efficacy, confidence in one's capabilities, tolerance for ambiguity and willingness to overcome obstacles and take risks are traits that facilitate creative thinking. (Valgeirsdottir and Onarheim, 2017)

However, even knowing that changes are a constant in our life, people do not openly welcome change since it implies a degree of uncertainty and insecurity that forces human brain to readapt to the new situation without relying on previous reference or experience. Independent to other factors, the more often people are exposed to something, the more positive they feel about it. Rare and unfamiliar things often provoke negative appraisals. (Brown, 2011)

Nevertheless, if we learn to naturally accept change as one essential aspect of evolution and development, we will learn to see contradiction, nonlinear and multi directional relationships as a source of inspiration, not contraration. Likewise, it is very important the welcoming and even enthusiastic acceptance of competing constraints and the establishment of a framework for evaluating them. (Brown, 2011) For that new way of thinking it is necessary to turn change into an habit so the person can welcome the unknown as something normal and positive, source of new opportunities. In this sense, originality and novelty will become the new routine.

### *7.3 Habits*

Habits are described as behaviors elicited partially or unconsciously. Habits reflect associative learning and the formation of context-response associations in procedural memory. As habits strengthen, they gradually become independent of the incentive value of their consequences, and free the mind resources so they can be used in different tasks. (Nir Eyal, 2014)

Drawing on the theory of Nir Eyal (2014) about how technology firms use habit formation to create and consolidate their market, we can learn how to normalize any chosen behavior by following a simple logic.

“By cycling continuously through successive desire engines, users begin to form associations with internal triggers, which become attached to existing behaviors and emotions. Soon users are internally triggered every time they feel a certain way. The internal trigger becomes part of their routine behavior and the habit is formed.” (Nir Eyal, 2014)

Habit formation always starts from a trigger, which basically is a state from which the individual feels the desire to take action in order to improve the current affective state. The action chosen will be always within the frame of abilities and motivation of the person. The easier the action is, the more motivating it will become to carry it out. For that action to be repeated in the future, there should be a reward expectation in response to the action. (Nir Eyal, 2014)

One of the most important neuroscientific discoveries of the last years concerns the reward system. The evidence suggests that reward system area becomes most active in anticipation of the reward, rather the reward itself. This means that the expectation of the reward, the picturing that one is going to get it may be sufficiently rewarding as to motivate action. Introducing variability of rewards multiplies this positive effect, activating the parts associated with wanting and desire. (Nir Eyal, 2014)

Once the individual is in that motivational state, there is a last step necessary to guarantee that the individual will repeat the action over and over, as to turn it into a course of action that does not need working memory and attention anymore, but that works unconsciously. This last step is called investment and implies an action that improves the experience for the next time the cycle repeats. These investments can be leveraged to make the trigger more engaging, the action easier, and the reward more exciting with every time the person repeats the cycle. (Nir Eyal, 2014)

By outsourcing action control to environmental cues, people have a ready response when distraction, time pressure, lowered willpower, and stress reduce the capacity to deliberate about action and tailor responses to current environments. (Nir Eyal, 2014)

## ***8. Place***

The environment by which the creative individual is surrounded and in constant interaction is very important aspect of creativity since it will provide the necessary elements for the person or product potential to be developed and to be recognized as creative. In general, creativity would have more chances to take place in a context that allows variety and exploration, and that in an ultimate stage, is recognized by someone as such. Similarly, the results of creative work will bring consequences to the environment.

In this context, In the following pages of this section I will elaborate on the specific context of creativity within the organization.

## *8.1 Culture*

Economic models offer an explanation of the risk and costs that individuals perceive by showing different in a large audience. Cultural context conform the value system within one is educated. The system of values tells about the importance of different social aspects and the behavioral protocol to be applied depending on the situation. This tacit understanding of reality and social interaction primes individual's perception of the world. Culture is represented by the way of life, especially the general customs and beliefs, of a particular group of people at a particular time.

The organization of a society, represented by its political and economic systems dictate the private and public resources display. The allocation of resources within a specific economic system definitely influences the production of creativity by providing benefits to certain behaviors that tend to reinforce them, or imposing costs in order to inhibit them and stop its expansion. These benefits and costs may be external to the individual, like monetary incentives, or career opportunities or may come from the actor's reflection, when comparing his or her situation to the rest of the people. (Kaufman, and Sternberg, 2010)

Consequently, the educational dynamics of a given system are key for establishing value systems and information processing structures. The process of learning and the constant integration of new knowledge within the environment of influence drive the direction of following changes and therefore the potential of innovation.

## *8.2 Organizational culture*

Culture defines the core values, assumptions, interpretations, and approaches that characterize an organization. The analysis that Cameron and Quinn conducted in 2011 about the how an organization's performance is valued is based on the competing values framework model.

The four quadrants that form the distinct sets of organizational effectiveness indicators are composed by two dimensions: from organizational versatility and flexibility on one end to organizational steadiness and durability on the other end; and from organizational cohesion and consonance on the one end to organizational separation and independence on the other.

The four types of organizational culture resulting from this analysis are:

1. Hierarchy: The organizational culture compatible with this form is characterized by a formalized and structured place to work. Procedures govern what people do. Maintaining a smooth running organization is important, so effective leaders are good coordinators and organizers. The long-term concerns of the organization are stability, predictability, and efficiency. Formal rules and policies hold the organization together.
2. Market culture is a results-oriented workplace. Success is defined in terms of market share and penetration. Leaders are hard-driving producers and competitors, so they are tough and demanding and their cohesion as a team is based on the emphasis on winning. The long-term concern is on competitive actions and achieving stretch goals and targets. Outpacing the competition and market leadership are important.
3. The clan culture is typified by a friendly place to work where people share a lot of themselves. It is like an extended family, so leaders are thought of as mentors or even as parent figures. The organization is held together by loyalty and tradition and the level of commitment is high. The organization emphasizes the long-term benefit of individual development, with high cohesion and moral being important. Success is defined in terms of internal climate and concern for people. The organization places a premium on teamwork, participation, and consensus.
4. The adhocracy culture is characterized by a dynamic, entrepreneurial, and creative workplace. Effective leadership is visionary, innovative, and risk-oriented. The glue that holds the organization together is commitment to experimentation and innovation. The emphasis is on being at the leading edge of new knowledge, products, and services. Readiness for change and meeting new challenges are important. The organization's long-term emphasis is on rapid growth and acquiring new resources. Success means producing unique and original products and services.

A change in culture depends on the implementation of behaviors by individuals in the organization that reinforce the new cultural values and are consistent with them. Interestingly, the highest effective leaders develop capabilities and skills that allow them to succeed in each of the four quadrants. Those are self-contradictory leaders in the sense that they can be simultaneously hard and soft, entrepreneurial and controlled. Managerial effectiveness, as well as organizational effectiveness, is inherently tied to paradoxical attributes. (Cameron and Quinn, 2011)

### *8.3 Culture of innovation*

The right organizational culture is one that provides the possibilities for the development of personal and group creativity skills through creativity processes” (Sefertzi, 2000). As mentioned above, innovation-driven organizations require mix of skills that guarantee the constant flow of inspirational ideas and their latter implementation through the application of multiple perspectives to an idea.

A right innovative culture cultivates curiosity. However, organizations normally have the habit of not zooming out enough to glean that perspective. An exploration attitude facilitates going beyond the evident and most immediate goal. This attitude inevitably leads to the need of harnessing the interaction among people and disciplines. Innovative organizations should set common spaces that ensure there’s tolerance for risk-taking, rituals that facilitate sharing the progression process of different projects and setting up maker spaces at work where people can prototype quickly. Being able to “sketch” or test the viability and desirability of several ideas at once is a critical skill in order to avoid wasting resources. However, for that model to be scalable, the team should design formulas that collect and analyze data in a rigorous and human-centered way in order to transform that asset into operational requirement. (Brown, 2017)

Anyone who's playing a leadership role is one step removed from the day-to-day and can ask bigger questions. However, the distance that employees feel with regards to the managerial team also influences the commitment to the ultimate goal. The coach sits and works alongside employees. That way, leaders can help teams when they most need it since they see the big picture and hold the global vision of the company. Playing this role builds respect, empathy, and enthusiasm for one's team, because leaders see all the hard work up close and connect to employees in a new way. Being in constant contact with the people the organization is designing for, creates a productive feedback loop. (Brown, 2017)

Aligning upon breakthrough ideas requires collaboration across disciplines. To predict the disruptive solutions of the future, one must now go outside the building and cross the boundaries of industry and avoid defining the competition too narrowly. However, for this purpose to come true, leadership need to develop a storytelling practice as a essential skill. The ability to persuade and convince people by storytelling, help the team picture the common purpose of the company. In that way, the idea will activate networks that can help develop it and will make it contagious within the organization. (Brown, 2017)

Drawing on design-thinking model of Tim Brown, the innovative process is a "system of overlapping spaces rather than a sequence of orderly steps". He proposes three spaces known and defined as inspiration, ideation and implementation. (Brown, 2009)

Inspiration is about research, discoveries and understanding. Research and accumulate data about the client's needs, by understanding the market and the opportunities that may come along. Through this space, the design thinker needs to take some constraints into consideration. To be successful, an idea has to be feasible, viable and desirable. In the ideation space, the goal is to make sense out of the ideas generated and produce adequate business strategies for the client. The implementation space is about taking the product to the market and introducing it to the potential customer in the most adequate way possible. The firm's role is to ensure to give its client all the tools needed in order to succeed in this phase. When building a product or idea,

design thinkers need to find a point of conformity and alignment between the three constraints: a smooth and balanced product that takes into consideration the three criteria. (Brown, 2009)

## ***9. Group creativity***

Group creativity is a function of creativity of individuals within the group and a variety of social processes and contextual factors that involve the whole process, including the way individuals interact and behave and the creative outcomes. (Hasenclever, Lopes and Paranhos, 2008)

Collective creation has certain advantages over individual creations. The variability of creative ideas is higher due to the presence of a higher amount of resources and combinations to choose from. However, the combination of that variety of resources will become more challenging due to the complexity of opinions and difficulty to find an agreement among everybody. Discussing, explaining and translating the idea help build collective understanding, but attention is key in the coordination of efforts of group interaction. Collective attention facilitates group members' cognitive engagement by situating new ideas within that interaction so that new knowledge can be created. Members devote their collective attention to the prevailing paradigm and consider emerging ideas in light of a shared understanding of that paradigm. Having a shared understanding of the dominant view of a problem does not imply that the members agree with that understanding. Even while sharing underlying values, group members can disagree about specific actions or ideas.

(Harvey, 2014)

Collective attention can facilitate the integration of group members and promotes a positive affective state. It makes the target, like a new idea, more psychologically meaningful and immerses the group members in the interactions. The affective state resulting enables members to think more broadly and flexibly so that novel and unique connections are more likely to be formed. (Harvey, 2014)

Cognitively, similarities are the basis for new connections between interpretations. Intense consideration of an idea from multiple perspectives helps people develop more complete and creative understandings. Analogies may be particularly valuable for groups because they directly connect members' diverse perspectives by helping one group member reframe her knowledge in terms of another's experiences. Reciprocally, having multiple examples from which to draw analogies enables people to abstract an understanding that can be transferred to a new problem. (Harvey, 2014)

### *9.1 Group emotions*

Group emotion is the term that defines group's affective state that arises from the combination of its bottom-up components (affective compositional factors of the group members) and its top-down components (affective context factors that shape the affective experience of the group) (Kelly and Barsade, 2001)

Like at the individual level, group affective states influence the group at three different levels: general input, that concerns the antecedents to the group experience; the process, stage in which affect is spread among other group members; and the output, resulting from group emotion and its effects on group life. (Kelly and Barsade, 2001)

Contrary to creative performance at the individual level, groups have to deal with emotional sharing processes, since they are in constant contact with each other. There two forms of social induced affect: deliberate, which are intentional or implicit processes, which are automatic and involuntary. There are also top-down factors in the group affective context that may impose an affective tone the group and amplify or constrain the ways in which a group expresses an emotion. (Kelly and Barsade, 2001)

Within the organization, there are certain affective context variables that can be categorized in three groups: organization emotion norms, local groups norms and the group's emotional history. Additionally, nonaffective context variables also influence group emotion, like technology, physical context and intergroup relations. (Kelly and Barsade, 2001)

At the individual level, the dispositional affect serves as a background to consciousness and has strong influence on individual level behavior in the group as well as on group level processes and outcomes. Group discussions affect the mood of the people within the group, since the individual confronts the group dynamics and can that may change her decision and judgements. Group discussions lead to greater polarization of positive judgements in the positive mood induction condition, whereas group discussion inhibits the polarization of negative judgements in the negative mood induction condition. In addition, as already mentioned, emotions are a constant element of influence in human behavior, and therefore in group dynamics. They have a clear cause or object, are shorter in duration and more focused and intense than both dispositional affect and moods. These are more likely to change beliefs and disrupt activity. Strong emotions can influence group cohesion, commitment and performance. (Kelly and Barsade, 2001)

Within a group, it is very important to be able to manage emotion smartly for creative potential to flourish. At the individual level, emotional intelligence is very important in order to be able to orientate efforts to effective group performance. In addition, sentiments play a role as valenced appraisals of an object and involve evaluation of whether something is liked or disliked. The two most notable in a group are satisfaction, result of workplace events and predictor of workplace outcomes and which is evaluated at the individual level, and cohesion, that is defined as the members positive attraction to the group. (Kelly and Barsade, 2001)

Affect states fluctuate around the group via different processes and depending on the type of interconnectedness of its members. In this sense, negative moods and emotions are normally easier to be transferred than positive. Implicit emotional sharing processes involve those captured unconsciously. Emotional contagion is the relatively automatic and unconscious tendency to converge emotionally and happens by means of nonverbal communication. Individuals differ in the degree they are good senders of emotion and in the degree to which they are good receivers of emotion. There is also a type of vicarious affective learning in which the observer experiences emotional arousal that can influence behavior, because of the influence

that the other person may have over the receptor, in case is seen as a reference or model. Empathy is also another type of vicarious affective experience, but in this case one shares other's feelings by placing oneself psychologically in that person's circumstance. (Kelly and Barsade, 2001)

Interestingly, behavioral entrainment and interaction synchrony are also nonconscious. Smooth coordination among participants leads to a more positive interaction. Synchrony can arise from the mirroring of another's movements and sequential coordination of speech and movement.

Among the explicit processes, there is intentional affective induction and affective influence, although sometimes affective induction can lead to effects opposite from those desired by the person sending the affect. Lastly, affective impression management involves engaging surface-level emotional displays in order to achieve goals, fit in, or gain rewards from the group. This may occur because of social presentation needs or social comparison needs in which people use information about others' reaction. (Kelly and Barsade, 2001)

Group affective tone influences group spontaneity and absenteeism. Cohesion is intimately related to the affective tone of the group. A greater cohesion improves performance, ability to put pressure on members and there is more likelihood of reaction over dissenters. Cohesiveness also brings more satisfaction and enjoyment and less anxiety and nervousness. Interestingly, positive dispositional affective diversity in teams is negatively related to the team's group dynamics, including perceiving group conflict and cooperativeness and group outcomes. (Kelly and Barsade, 2001) Additionally, closeness and frequency of interaction can influence the willingness to exchange knowledge. Team members who interact over time develop greater knowledge of each other and a shared understanding of the rules of engagement energies. (Hasenclever, Lopes and Paranhos, 2008)

The affective context in groups is determined by the organizational emotion norms. These involve display rules, or expectations about which emotions ought to be expressed or hidden and feeling rules, that is, expectations about what emotions ought to be experienced in a

particular setting. Along the course of time, groups evolve. The change of function, developmental stage, type of task and implicit and explicit communication strategies will lead to the development of local group-specific emotion norms, in addition to the previous ones. (Kelly and Barsade, 2001)

Every emotional experience felt by a group adds to and becomes part of the group's particular emotional history. This history then influences expectations for emotional expression in the future group interactions, as well as behaviors in those interactions. (Kelly and Barsade, 2001)

### *9.2 Creative Synthesis Theory versus Random variation model*

Groups tend to be more creative when they fully access members' cognitive resources, have diverse social resources based on group composition and interaction, and are supported by environmental resources that motivate members to generate and share ideas. (Hackman, 1998)

Creative synthesis theory is a model that explains how integration of group members' perspectives into a shared understanding that is unique to the collective provides a solid basis for sustainable breakthrough ideas production. (Harvey, 2014)

Random variation model followed by selective retention consists on a staged process in which the first step is the identification of the problem followed by the ideas generation proposed to sort that problem out. Then the ideas are compared against evaluation criteria. The process finishes with the selection of the best idea, which will end up being implemented. According to random variation process, group creativity occurs because members hold different perspectives that stimulate one another's thinking. (Harvey, 2014)

The stage of idea generation occurs through divergent thinking, in which one group member's ideas stimulate new directions for others' creative thinking. The process is adaptive because it implies a change of mind or evolution of thought of the creator, oriented to the goal of finding a solution to that specific problem. The process starts and finishes with the problem, so there is

not reason for a systematic production of radical changes, but rather the punctual production of incremental innovations. (Harvey, 2014)

On the other hand, people engage in social interactions that are determined by their understanding of a situation. That understanding influences ways of thinking, the questions that are asked and the rules for what is acceptable and desirable. Because interpretations of situations and the actions that flow from them contain incompatibilities, inconsistencies between competing views create the opportunity for novelty to emerge. That opportunity is realized when understandings are reconciled in a creative synthesis. (Harvey, 2014)

Conflict is a core element in both models, however its causes and consequences are different depending on the process. In the random variation model, conflict originates in the perspectives that members bring to the group and stimulates idea generation through dissent and disagreement. Conflicts facilitate divergent thinking at an early stage of the process. In a dialectical model like the creative synthesis theory, conflict arises through the continual social interactions between members and environment. Opposing views move toward one another so there is opportunity for diverse views to be integrated, and thus there is a constant flow of communication that stimulates convergent thinking by trying to reach common points. (Harvey, 2014)

The dialectical model explains how multiple divergent entities change and develop over time as a collective process, what brings up the opportunity for radical novelty. Synthesis and exemplars that arise from the process are qualitatively different from previous understandings. Integrating opposing dialectic forces provides the opportunity to change multiple features all at once, which is associated with more profound change than altering a simple dimension. The model explains how a conceptual space can be transformed and become the new way in which things are perceived. (Harvey, 2014)

The core creative act of a dialectic process is the synthesis of different ways of understanding or interpreting a problem or situation. The synthesis both enables the development of specific ideas that exemplify the synthesis and develops along with these exemplars. This process limits

the number of variables a group can consider when developing an exemplar, but it also frees the group to focus on its creative efforts on those variables that remain. (Harvey, 2014)

Creative synthesis recognizes and facilitates new associations of what up until then were distant or unrelated concepts. These new associations constitute new patterns or basic understanding for making new associations. According to the creative synthesis process, group creativity occurs because the space that exists between members' different perspectives offers the opportunity for a new framework to develop that connects them. The new conceptual framework shared among members act as a map with which group members can search for and evaluate new ideas. Within the map are rules or associations that underlie the original perspectives that make up the synthesis and their relation to one another. The emerging map then guides the idea generation process, helping the group identify the most promising directions. Because selection criteria are wherein the map, the group may still view new ideas differently, and therefore new ideas may become acceptable and valued. (Harvey, 2014)

The ability to use diverse resources is necessary in both models, but those resources are transformed into creative output in different parts of the process. After producing creative output, a group will receive feedback from the environment. Team members may interpret that feedback differently and those interpretative processes will reveal new conflicts and fissures. The synthesis therefore contains new building blocks for new paradoxes that lead to the next change. (Harvey, 2014)

The dialectical model can fail to produce extraordinary creativity in different ways. Within a group, certain dynamics may fail to produce group creativity, for example, not enough underlying diversity or conflict there is little opportunity for a novel synthesis to form. Also, members lack of cognitive thinking skills or cognitive flexibility may form a boundary condition for the process, as well as the cases in which one perspective dominates the rest. It may also be possible that over long stretches of time, the synthesis becomes stable and the group may exhaust novel exemplars. (Harvey, 2014)



## METHODOLOGY

Pure scientific research has traditionally been designed under the the norm of objectivity, understood as an ideal of disinterested, factual, replicable, lawlike knowledge of social reality, a knowledge wholly independent of human interests, passions, and all subjective entanglements. Science aims for clear definitions and unambiguous connections, therefore the researcher evidently puts bias and subjectivity aside. Looking at it from a positivist perspective there is only one way to “do science” and any intellectual investigation must conform to established research methods (Neuman, 1994).

However, it is precisely physical sciences and its consolidated success what demonstrates the importance of the reference point, the subjective part, in constructing reality. According to the Copenhagen interpretation, physical systems generally do not have definite properties prior to being measured, and quantum mechanics can only predict the probabilities that measurements will produce certain results. (Capra, 1975)

This new point of view within the physical science field open the debate between the desirability of a purely objective knowledge and the unavoidable participation of subjectivity in the construction of reality, especially in what social science concerns. Consequently, it all gave rise to critical theories of the postmodern era, which open up the possible range of research strategies. Social science must accept the radically subjective nature of its research fields and devise methods and approaches to capture the phenomena of subjective life.

Emotions and creativity are both result of the interaction between the individual and the environment. They are basic features common to all humans and as such, science is committed to find a common framework that can explain their nature and functioning independently to the individual that experiences them. Advance in technology in the last decades have facilitated the

development of neuroscience as the pure scientific field in charge of this issue. Neuroscience, is an interdisciplinary science that studies anything to do with the nervous system. Neuroscientific research is currently involved in a much wider scope of fields today than before, due its influence over human affective responses and behavior. Emotions and creative thinking can be studied under an objectivist point of view according to their nature as result of the combination of different brain processes and mechanisms.

On the other hand, these two concepts are characterized by their heterogeneous manifestations, understood as subjective human appraisals in response to their interaction with the environment.

### *1. Importance of the framework*

Pure and logical science abstracts language further by limiting the meaning of its words and by standardizing its structure, in accordance with the rules of logic, that is rational thinking. The ultimate abstraction takes place in mathematics where words are replaced by symbols and where the operations of connecting the symbols are rigorously defined. (Capra, 1975)

It is important to realize the difference between the mathematical models and their verbal counterparts. The former are rigorous and consistent as far as their internal structure is concerned, but their symbols are not directly related to our experience. The verbal models, on the other hand, use concepts which can be understood intuitively, but are always inaccurate and ambiguous. (Capra, 1975)

Drawing on Polanyi's work on tacit understanding, identify two types of knowing. The first is 'codified', which can be transmitted in formal systematic language and as such can be explicit. In contrast, tacit knowing, the second type, is personal, subjective and context-specific, and so can be difficult to communicate and is therefore implicit.

## *2. Paradigm election*

Because they are human constructions, paradigms inevitably reflect the values of their human constructors. Reality observed by a human can be seen only through a value window. They enter into inquiry at choice of the problem selected for study, the perspective taken for the analysis, the instruments and the analytic modes used, and the interpretations, conclusions and recommendations made.

The analysis and conclusions of this project have been approached from a constructivist perspective, taking the observant of reality as active participator of its construction. It aims at explaining how behavior is driven by inner constructions and interpretations that people make out of every situation. However, it also draws on pure scientific knowledge, traditionally viewed from a positivistic point of view.

Given the success of physical sciences in the development of modern society, technology and knowledge, it is evident that the universe is ruled by certain logic rules common to everybody. However, advance in modern science have gone a step forward in the recognition of human capacity to use those “objective undeniable true facts” as convenience. In this sense, I have sustained a more postpositivist posture in the sense that I recognized that there is a common true of mental structure and neurological processes, although our intellectual capacity is still far to be able to fully understand.

## *3. Elaboration process*

Autoethnography consists on the sharing of unique, subjective and evocative stories of experience that contribute to our understanding of the social world and allow us to reflect on what could be different because of what we have learned. Wall defines autoethnography as “an emerging qualitative research method that allows the author to write in a highly personalized

style, drawing on his or her experience to extend understanding about a societal phenomenon” (Wall, 2006)

Autoethnography builds on a subjective qualitative research with the aim of finding a new way of social knowledge. Autoethnography is an approach to research and writing that seeks to describe and systematically analyze personal experience in order to understand cultural experience. (Wall, 2006).

By virtue of being human we are constantly seeking to understand ourselves and our environment. Drawing on Moustakas theory of heuristic inquiry, the research process begins with the identification of a question that is deeply felt, a question that has an emotional effect on the researcher and cannot be ignored.

Moustakas (1990) identified that understanding and change occur in heuristic inquiry because the researcher becomes an instrument, a data-collection tool for the research process. This means of engaging with data collection involves being receptive to information that is collected through the senses, and responding to non-verbal clues and experience. (Kenny, 2012)

Heuristic inquiry is one of the terms introduced by Moustakas. The aim is to “awaken and inspire researchers to make contact with and respect their own questions and problems, to suggest a process that affirms imagination, intuition, self-reflection, and the tacit dimension as valid ways in the search for knowledge and understanding” (Douglass & Moustakas, 1985, p. 40). The basic design of a heuristic research project involves six steps: initial engagement, immersion, incubation, illumination, explication, and culmination in a creative synthesis (Kenny, 2012)

Interestingly, according to the creative process theory, the heuristic inquiry can be understood as a creative process itself. The first stage of initial engagement relates to the identification of an unsolved question or problem. In the heuristic inquiry, the problem construction points to the emotional effect that has on the researcher, that makes it impossible to ignore. The process of

immersion is the consolidation of that need by means of contextual data collection and information gathering, with the aim to stay fully with the experience of the phenomenon in whatever form it takes. Incubation is the phase in which the researchers takes some distance and retreats from intense and focused attention on the question or data to engage in activities that are unrelated to research. This is the stage at which an unconscious conceptual combination is produced. The illumination phase refers to the individual experience of insight, in which there is a change in perception of the subject of inquiry. The internal frame of reference that had previously been in place is altered. Finally, the explication involves the time of verification of the results of the process, leading to an understanding of what meaning it might hold. Finally, the creative synthesis is the implementation of these new approach or understanding to the individual heuristics ability. (Kenny, 2012)

I have designed the research chronologically since the process of learning is the main plot line of this study. The qualitative data collected comes from my personal experience, from the reflections I have done along the way and from the experiences accumulated as the consequence of all the process. However, there have been some external actions and circumstances, out of my mental construction, which have influenced the perception of the actions undertaken.

# ANALYSIS

In this section I am going to apply the most relevant theory exposed in the previous section to the case of study, which is based on my own experience as employee of a company in the last two years. It is a period of time characterized by the constant presence of challenges that I overcome by gradually evolving personal and professionally. This section also presents the basic information about the company in order to facilitate the understanding of the context, although the appendix contains the narration of all relevant facts that took place along these period.

This particular case therefore applies to the micro-level definition of the working methods of the creator. The main characteristics of this profile are the steady continuity and progressive development over time, by contributing to incremental improvement rather than radical changes.

## **Structure of the analysis**

I have divided the case into three different critical points. Each one is analysed by taking into account the following aspects:

- Context change and its implications: the starting point of a critical moment always starts from a change or problem that the person has to face. In this case, those situations have taken place in a professional context, but also have affected me personally, as they are part of my experience.
- Emotions elicited by those changes and the resources needed to overcome the challenge: in order to overcome that new challenge presented, the person needs to evaluate the situation and combine resources at hand in order to develop a solution.
- Results of my action: the solution is tested and implemented in case it is the correct fit. In case it is not, the process should be repeated in order to find a more suitable solution. When the outcome of the whole process that results from the new combination of

resources in novel scenarios is considered as useful, we can define the whole phenomenon as under the term of creativity.

- Learning process and possible future behavioral implications: the person who combines the resources, will never lose what has learned in that process, and next time she or he has to face another challenge, the starting point will no be the same, since the way of perceiving the reality would have evolved too.
- Overall impact on creative performance within the organizational context.

The selection of the term “crisis” is due to its meaning as the turning point or stage in a sequence of events at which the trend of all future events is determined.

### **The company**

The structure and the culture of a start-up is quite different to the structure of a company that has been operating in the market for a long time. A mature organization has a developed and consolidated culture, with established structures and routines that facilitate the transfer of know-how and general knowledge, training and recruiting among the stakeholders. Start-ups count with less resources than a mature company and when facing problems or new circumstances, small organisations lack experience. This results in the need of an innovative and quick adaptive behavior, which translates into extra effort in developing solutions. This specific context of uncertainty in small organizations is characterized by the high risk due to limited amount of resources at play and lack of experience.

The company chosen for the case is a startup of the tourism industry. Its main product is low cost walking tours for tourists. This company does not offer tangible products but experiences for clients, a service. The target market is any tourist that wishes to take a walk around the main highlights of the destination at a low price. Consequently, the staff that works for that company is specialized in customer service, since that is the core value that guarantees its success and defines the competitive advantage of the business.

Sandemans New Europe was founded in 2003. It operates in 18 different cities, mostly in Europe although also North America and Middle East. Due to the nature of the business,

characterised by low entry costs and ease of replication, the company opted for growing very fast in the first years in order to become leader of the sector by spreading its brand awareness all over the main tourist destinations.

Despite the main departments are centralised in Berlin, which was the first city of the network and nowadays represents the biggest business unit and headquarters, every city operates independently. The reason for this autonomy is basically that every country has very different rules and factors, so it is necessary a specific market knowledge in every different city.

This company's main activity is the promotion of walking tours. It works as the connection between the client and the guide, the latter working as a freelance. Even though there is a close connection between the company and the freelancer, the guide is considered as a partner of the company. The staff hired by the company play the roles of promoters, coordinators, public relations and managers. However, the display of different roles and responsibilities depends on the size and composition of each local team.

## ***1. Crisis 1***

### *1.1 Context change*

My work environment changed. The head of the business left the team and the people that took his place had no previous experience in that field. Moreover, the whole team thought that he had lead the local business excellently, so standard that the new team was demanded to meet was quite high.

There was not much room for preparing a proper transitional process due to the unexpectancy of the change, so the only viable alternative was to leave me, the employee with the most experience in the team, at the front line of all the operational problems that may arise. However, actual technical competence is not a sufficient prerequisite to succeed.

It was certainly a good opportunity for me to prove my potential. An individual who believes in her ability to achieve a goal, can conduct a more active and self-determined action. Self perception is a crucial concept in this discussion since directly influences the way the person will take action when facing the threat. If the individual underestimates his potential for action, no adaptive strategies can be developed. Therefore, perceived competence is crucial. Behavioural change is facilitated by a personal sense of control. If people believe that they can take action to solve a problem instrumentally, they become more inclined to do so and feel more committed to this decision. This cognition mirrors a sense of control over one's environment. It reflects the belief of being able to master challenging demands by means of adaptive action. It can also be regarded as an optimistic view of one's capacity to deal with stress. (Conner, & Norman, 1995)

### *1.2 Emotional management*

Actions are represented first in thought, and people anticipate either optimistic or pessimistic scenarios in line with their level of self-efficacy. Self-efficacy levels can enhance or impede the motivation to act. Once an action is undertaken, high self-efficacious people invest more effort and persist longer than those with low self-efficacy. When setbacks occur, the former recover more quickly and maintain the commitment to their goals. A sense of competence can be acquired by mastery experience, vicarious experience, verbal persuasion, or physiological feedback (Bandura, 1992). In my case, the fact that I had been trusted to lead that situation had an effect on me. I experienced a self-pride feeling that helped calm my stress down and see things in a more optimistic way. A successful company does not get to that position by taking unreasonable risks driven by unrealistic optimism, but base their decision on other factors such as experience and human resources optimization. (Conner, & Norman, 1995)

I firstly felt afraid, since I was the youngest person in the team so, even though I was self-confident, the negative perception that others might adopt about my capacity to lead the team conditioned my behavior. This kind of fear depends more on top-down processes rather than simply emerging bottom- up from a motive state as a result of external stimuli, since the threat is created in the mind in first place. (LeDoux,1996)

When a person feels insecure in certain context, fear is going to dictate the search for resources. The specific type of response elicited by the emotion of fear leaves the subject in a situation in which is not completely aware of all what is happening in the environment, since this person is too focused on “surviving” that most of her resources are directed to that goal. The subject deviates the attention from other factors that also affect her life, but that remain in the background while focused on the imminent danger. Even though fear is an emotion that intensifies stress, the need of overcoming the urgent situation, left me not choice but to control my behavior. (LeDoux, 1996)

Actually, the projection of a negative future and foreseeing such scenario as a possible future, may end up resulting in a self-fulfilling prophecy, since the brain considers those scenarios as likely and therefore facilitates their existence. (Brown, 2009)

### *1.3 Results of my action*

#### **Leadership style**

My first steps and decisions as inexperienced manager relied on immediate feedback from the team I was in charge of. My belief in the common goal and desire of achieving best for the company and the people who worked there, took me to think that being empathic and asking for opinions would help everybody to feel heard and taken into account, at the same time as helped me see the consequences of my decisions. That new way of approaching problems and people started to work. The team initiated a new period based on confidence, relying on more on informal communication, cohesion and teamwork as means to overcome the critic period. All this facilitated collaborative efforts, although it also brought some downsides, since some people misvalued my capacity for independent decision making.

#### **Problem representation**

A problem can be regarded as something negative that limits the optimization of resources, or as something positive that provides with the opportunity of new combinations or development of skills. In this case, one of the biggest problems that I encountered during this phase was competition. Due to the nature of the business, entry barriers are almost nonexistent. That

means that our “market” is constantly threatened by the presence of new companies which want to have a place in the same segment. However, the form in which ones decides to face this issue may weaken or strengthen the company.

The entrance of a new competitor with an aggressive strategy made a point in our team spirit. Once we started to see how we were losing market share, a feeling of frustration and disappointment quickly spread all over the team. When these kind of situations happen, there are two types of explaining the reasons for it. Some people tend to feel responsible of the situation and therefore sees also the solution as something achievable, and some other people tend find excuses outside to get rid of culpability feelings. Interestingly, it is normally the latter type that tends to be more negative about the situation and transmit it to the rest of the team. This attitude is dangerous in the dynamics of a group, not only because of affective contagion, but also because the stress that anticipating failure may provoke can also affect the performance of capabilities needed in the current situation. Our emotional reactions to the choice set have a modulatory role which influences the computation of subjective value, that is a primary factor underlying decision making. ( Phelps 2014)

However, optimistic people tend to see adverse contexts as opportunities to learn and develop. In our case we evaluated the points at which they were performing better than us and focused our attention on reducing the distance in that specific aspect. The belief that the other company was not better but that had found a good way of doing things, helped us get to that point. This increased the range of our company’s knowledge and caused people to see old problems in new ways and helping companies break from the obsolete routines that were not efficient any longer.

## **Learning**

From this experience I learned how important is to lead a team without transmitting them all the pressure that one has on the back. In a critic situation like the one exposed in the appendix, where everybody has certain dosis of stress, it is necessary a reference where the team can see hope and future, in order to cool things down and provide certain guide. Emotional management is complicated under high levels of stress because our emotions are firstly

processed unconsciously, so responses are elicited before rational thinking takes into consideration if they are appropriate or not. However, awareness and knowledge about this information processing mechanisms helps relativize and thus importance given to the situation, together with energy invested in considering it decreases. (LeDoux, 2015 and Punset, 2010)

## **2. CRISIS 2**

### *2.1 Personal expectations versus professional responsibilities*

In this case, once that first wave of stress passed, the new year brought along new challenges. I got used to assimilate changes very quickly and to look for solutions optimistically, since being assigned a position as the head of the team with no other choice, had forced me to find ways to motivate myself and motivate others, even under uncertain circumstances. However, at this point, I also started to feel a misfit between my personal intentions in terms of goals and expectations and the situational circumstances that required me to keep working in the same direction.

### *2.2 Emotional management*

Every situation can get potentiated if there are intense emotions involved. The environment plays a huge role in the way we perceive reality and negative affect contagion can have significant influence over the mood if the person is not aware of it. Cognitive dissonance theory elaborates on the possibilities of action when there is a misfit between situation demands and own resources. I decided to deviate the attention to those influences through trivialization, which refers to a decrease of the importance of the relation between the stimuli and the person so the emotional impact is not that relevant to the person. I redirected my efforts and resources to a productive purpose.(Festinger, 1957)

### *2.3 Results of my action and learning*

By this second phase of the case, I had accumulated several domain specific skills in the areas of customer service, team leadership and business resources management in general. By consolidating this learning, I realized how I could develop certain daily activities fast and automatically. This habitualization of tasks simplified the understanding of a topic and facilitated the engagement in efficient forward reasoning in order to generate more effective problem representations. What used to be uncertain became normal and less stressful, which made me feel more confident about the control of the situation. (Rietzschel, Nijstad, & Stroebe, 2007).

This situation has two different consequences:

- Expertise in a field increments the fluency potential of ideas within a few categories due to the deep understanding that the individual possesses of the subject. Focusing the attention on in-depth exploration of a few cognitive categories also influences creative fluency and originality.
- There is room for the development of new knowledge and skills. Consolidated knowledge does not require investing energy on learning anymore, thus one can put the focus on the creation of new associations.

I had the opportunity to compare how associations that people may do are not that evident for different individuals. This situation made me think of how differently we all perceive the world. Nevertheless, new concepts and associations can be taught and learned. I was in a position in which I could influence those processes by training new employees, which gave me the opportunity to test the most efficient ways of making people learn. At the same time I realized about the responsibility of representing a brand image, taking a careful awareness of the image I was projecting in every public action undertaken with my words, actions and body.

#### **Customer service skills:**

Customer service requires employees able to provide with a good service to unknown guests. Due to the nature of our work, our target market is quite heterogeneous and different. There are many kinds of people who may be interested in a service like ours, therefore the staff of the company needs a flexible skill set that adapts quickly to changing situations. Every person is different, and therefore using the same approach strategy for all profiles will not result successful.

First of all, the staff in charge of customer service has to deal with clients in a face to face situation. Sales skills require an understanding of how emotions affect behavior. Awareness of their causes and consequences is an advantage in social situations. This control of the conversation empowers the observer and gives the opportunity to influence the outcome.

The first step of a good service is the identification of the needs and, for that, employees have to be empathic in order to understand the affective state of the client, since the final decision partly depends on the management of those emotions. If the employee succeeds in that task, the client is going to be understood and therefore, will have a positive first impression of the person providing the service.

Sometimes clients are groups, so the ability to identify the roles displayed as well as the affective state of the group is very useful in order to focus the communication efforts smartly. In a social situation, there is always a person which in charge of the decision making, and other members of the group will meet different roles.

Secondly, individuals capable of making associations out of distant concepts are highly valued in customer service area. It is important to know how to sell an idea to a client, to be quick in recognizing the guest's needs and relate them with the product or service the company can offer.

Body language is an important part of this understanding process. People unconsciously express their emotional state through body language with gestures and postures. Actually, we often express with the body what we do not express with words, either because we have not processed those emotions consciously yet, or because we hide them intentionally. Being able to read what the body says is an advantage to get orientation about other people's affective state.

Reciprocally, individuals can transmit different messages by manipulating one's own body language. The receptors of the message receive this information unconsciously and, depending on their awareness and attentional resources, manage to process the information rationally and make conclusions out of it.

### **3. *CRISIS 3***

Reflection about previous phases made me realized how scalable were certain conclusions that I had made out of a specific situation, therefore realizing the possibility of implementing already existing solutions into new contexts.

#### **3. 1 *Radical change of environment***

Even though I continue to work for the same company, the dynamics of the group are totally different. The new context is characterized by being more complex due to the bigger size of the business in terms of clients and revenue. This implies a bigger team and higher quality standards as human resource.

The capacity of making associations between my previous situations and the new context potentiates cognitive flexibility since it implies the array of different cognitive angles from which interpret reality or resolve the problem in question. That is, the more sources or points of views one counts on, the more ideas overall. It also measures the inclusiveness of the categories used for idea generation. Cognitive flexibility can thus not only be seen as a measure of creativity but also as a precursor of the production of many and original responses. (Scott, Leritz and Mumford, 2004)

### *3. 2 Emotions management and new team*

The constant interaction among team members within groups gives rise to emotional sharing processes. In a business context, these affective states need to be smartly conducted in order to make the most of such social situations, since time and resources are limited and need to yield profit.

When an individual interacts with other group members, understanding the emotions of other people is not sufficient to succeed. Team members need to work aiming for the same goal and with a long-term vision. Every emotional experience felt by a group counts and becomes part of the group's particular emotional history. That emotional trajectory influences future scenarios of group interaction by setting the expectations for behavior and emotional expression. (Kelly and Barsade, 2001)

One of the first and main goals that my supervisor set for this new professional stage, was to lead the team of employees to a higher level of efficiency by motivating and training them in customer service area and other abilities related to the position. One of the main obstacles that I found at this point was that there was not adaptive period, and from the beginning I was asked to lead a team who did not know me and therefore did not welcome my initiatives happily. Moreover, it is important to note that team had already experienced to have another team leader with no preparation for it, so their expectations of the results of the training were lower than normal before I had even started.

Parallely, I have experienced how a poor management of stress by the top-management members influenced the whole team mood and therefore its performance. This type of vicarious affective learning is unconsciously transferred by the person seen as reference to the subordinates, who experience those emotions and which in the end turns out to be become the general mood. That negativity influences the approach and strategy adopted to reach the goals. In the case that I have exposed, the top management team tried to apply micromanagement techniques in order to have complete control of every movement of the employees. This technique affected negatively the self-confidence of the employees and therefore their performance since they did not believed in their potential and needed constant feedback. This

situation may also gradually transform perception that the staff has of the leadership, turning from inspiring to intimidating. Conclusively, it is necessary not only to be aware of other people emotions but also to be able to consciously perceive those in oneself and control the behavior that may result from them.

However, there is also a positive aspect of this type of management: employees never felt too relaxed or unchallenged. When the staff is not used to that intensity, people may feel too stressed and overwhelmed. However, once the person gets used to that and learns how to routinize that constant combination of tasks and responsibilities, cognitive flexibility and reaction velocity increases. Moderate stress levels improve cognitive capacities for reasoning and creative thinking. (De Dreu, Baas and Nijstad, 2008)

Feeling confident to express one's emotions to others helps the reduction of stress accumulated and helps improve the understanding among members, which in the end benefits overall performance. The expression of the emotional state may also help the person affected by it, since it makes that person define and analyze it in a rational way.

In the example exposed above, the lack of confidence between employees team and top management team impeded the flow of feedback bottom-up, which lead to less cohesiveness, taking away satisfaction and enjoyment and bringing anxiety and nervousness. As already presented in the literature review, extremely high levels of arousal reduce the capacity to perceive, process, and evaluate information. (De Dreu, Baas and Nijstad, 2008)

Additionally, the lack of cohesion within the group also affects creative performance. For people to feel good expressing and testing new ideas, it is important to provide with certain emotional support in which that person does not feel afraid to fail, but willing to take the risk of proposing something unusual. This is one of the first things that I heard when I started to work in this team: "better ask for forgiveness than for permission".

### *3.3 The innovation process within the team*

Creative process and its practical implementation into the business context counts on three different stages, that may be combined differently. Preparation or inspiration is the period when

the basic information or skills are assembled through research and understanding of the context. Incubation or ideation is understood as the time when connections among concepts and understandings are made, which may happen at unconscious level, deliberately or both. Finally, production or implementation consists of the process in which insights are put into a useful form. The specifics of the whole process will vary depending on the type of creativity (Andreasen, 2011 and Brown, 2009).

### **Framework**

The first step of the design process is often about discovering which constraints are important and establishing a framework for evaluating them. The initial brief is the set of mental constraints that gives the project team a framework from which to begin, benchmarks by which they can measure progress and a set of objectives to be realized.

Freeing our thoughts is an important part of creativity, although it has to be combined with certain discipline and inhibition of certain aspects as well. Inhibition serves necessary social functions, preventing certain impulses from being acted on and enabling the delay of gratification from pleasurable activities. The leadership has an important role at this point since it represents the middle point between the chaotic creative process, the business model and client's requirements. (Brown, 2009)

### **Team composition**

The management team in which I am enrolled and from which all creative ideas are supposed to departure, is composed of five people. Even though each one of us is different and therefore stands out from the rest in a certain aspect, the composition of the group is not varied enough for being a multinational company. Four of us share nationality and within that group, three are from the same region. All that means a shared understanding of the world, which favors agreement, although it may imply a low variability of perspectives. Moreover, it also repercutes the influence power, since there is one member of the team who does not belong to the same culture and does not speak the same language.

Another aspect of the innovative team composition is the hierarchy levels display of the team. In a group of five people, there are three different hierarchy levels. This structure should not affect creativity performance if all voices are heard and respected evenly as to help open discussion and favor emotional synchrony, shared and understanding and, consequently, creative synthesis. This overall situation affects the process of ideation because it may inhibit team members from expressing their thoughts.

Considering creative synthesis as the ideal model to guarantee constant creativity, the existence of different ways of perceiving realities should be potentiated by forming a team with a diverse array of skills and background.

### **Time**

One of the main obstacles for developing innovations is resources limitations, particularly time pressure. There are several projects that we want to develop and implement, but most of our time is invested in daily operational tasks. The lack of time to focus our cognitive resources on the incubation phase (related to new association making) impedes the sharing of ideas and the potential of reaching a shared new understanding focused on the identification of new opportunities. The rush to finish sooner, to be efficient, to stay on or get ahead of schedule often predisposes stewards to make and encourage decisions earlier rather than later. But hurrying to decisions hinder the incubation stage. Rather than forcing decisions as early as possible in a creative process, managers may do better to make sure closure is achieved neither too fast nor too slow. Moreover, the stress of not achieving goals entails, adds up to the final negative outcome. (Austin, Nolan, 2007)

### **Physical space**

The physical environment is also an important aspect that affects creative performance. Physical spaces should provide with the commodities that trigger the production of ideas. For each different stage of the innovative process it may be necessary a different display. In the divergent thinking phase, that is, idea generation, spaces should facilitate the free association of concepts and the easy flow of communication. Convergent thinking may need of more

organised spaces to help put certain order in the ideas. In the case of this project, the team bases its operations in one sole space, quite small for a team of more than five people in total. Additionally, the rush and stress for getting things done resulted in an unorganized physical space.

This idea of physical spaces can also be applied to physical objects. Enacting ideas that emerge during group interaction by producing physical objects can further aid creative synthesis. Enacting ideas moves them forward implementation phase and helps a positive collective affect: by helping other group members understand others' abstract concepts. whiteboard, different drawing techniques and colors codes are some examples of the tools that we have gradually implemented in our routines during innovation sessions.

## DISCUSSION

### *Theory*

Individuals are active participators of the construction of reality. We all have a system of concepts and symbols which constitute a map of reality. Our nature as social beings requires the development of a shared language that help the interaction among each other, in order to be able to live under same rules peacefully. However, the words of our language are not clearly defined. Our map of reality represents only some features of it and we do not know exactly which these are, since we started compiling our map gradually and without the critical analysis in our childhood. Words and concepts may imply different meanings or associations in each individual, due to their unique life experience. The awareness about the inaccuracy and ambiguity of our language is essential for realizing our incapacity to describe emotions or feelings.

Emotions are a common aspect to all individuals and affect human behavior, although their subjective and unconscious nature complicates the elaboration of a shared understanding and recognition as essential aspect of life. On the other hand, creative thinking is also a phenomenon product of human brain. It involves unconscious process as well as rational thinking. However, understanding all aspects of creativity is also a challenge for human brain, due to the wide array of inputs that it involves and outputs that it produces. This personal concern about the general ignorance of these two important phenomena impulsed me to go deeper into its understanding.

This project elaborates on all the relevant knowledge that exist concerning both concepts and the potential impact of emotional states over creative performance and potential. Firstly, I have expose all the different points of view from which one can analyse creativity. From that starting point, I made a choice of the most relevant perspectives that would allow me to relate it to emotions. I tried to analyse the aspects of creativity from small to big scale: I started by

explaining the brain underpinnings from a neuroscientific approach, in order to contextualize the role of emotions in cognitive performance. I also related that information to the brain mechanisms that affect creative thinking. The theory review section follows with the main psychological concepts of emotional management that could potentiate creativity. Learning about the individual's creative capabilities potentiation led me to the formulation of the question that drives this project: Does emotional management foster creativity?

Once exposed the knowledge about creative human behavior, I elaborated on the literature that studies the interaction of individuals with the rest of the environment. (meaning by environment anything external to the individual's brain and body). For a better understanding of that interaction, it is necessary the practical application of this knowledge. This is the reason why the last part of the theory review is focused on creative performance within the organizational context. Particularly, I have highlighted the main drivers of innovation in a company and how the collective affective state plays its role in the process.

### *The case*

All this objective learning about creativity and emotions has been applied to a real case. The analysis of the case aims at consolidating my understanding about emotions and creativity underpinnings and how I have progressed personal and professionally by applying that acquired learning to real life. There are three different stages that can be distinguished in the case study:

- The first phase of the experience is characterized by the radical change of environment. Even though it was not such a drastic change of context from an objective point of view, the importance of this critic moment was the emotional impact that it had on me. This phase implied a lot of self-reflection about my own emotions in order to be able to control them. The more I learned about them, the bigger the curiosity I felt about their potential influence over creativity. I also acquired many other skills during this time that basically concern business managerial duties. The lack of experience and negative view of the situation that I had in the beginning did not help provide with the most desired results in this first learning phase, in which I repeatedly made mistakes.

- During second phase of the experience, I started to see positive results. This positive progression happened not only in the pure measurable aspect of business and also at the emotional level. I consolidated certain technical and emotional skills like teamwork and customer service. The application of these qualities helped to develop insights that initially appeared to be unique to a particular situation but that eventually also had some wider significance. Additionally, being able to use that knowledge effortlessly and with less mistakes gave me the opportunity to zoom out and think bigger, so I started to span my perspective and think in long-term projects. This positive trend influenced the team motivation and, even though I still had difficulties, it all became a virtuous cycle of optimism.
- The last phase consists on a sophistication of this specialization. I had faced two major changes in the last six months, so even though this time the context changed radically, I was ready to welcome the new circumstances. The process of adaptation was longer in this case, since personal and professional factors changed all at once. However, my capacity to deal with novel problems by combining old a new resources had improved, as well as the control over the stress that all those changes brought about. Therefore, after that period of adaptation, it is no longer about the application of my skills to solving my problems, but about spreading and sharing that knowledge with the people that conform my environment. The challenge in this phase is the creation of a scalable model that can be taught to anyone, independently of their individual characteristics or situation. The main difficulty of this task is the control of the consequences of one's action. In this case, communication style is key, since people perceive the world differently by their scale value and experiences, and in that sense it is difficult to predict the impact of the message transmitted. Again, communication here must be understood in an overall sense, involving not only verbal language, but body, emotions and behavior as well.

In this project, I understand creativity as a complex system composed by a net of interactions, all of them interconnected. Those interactions can be considered under many perspectives, from

the neurological level through cognitive mechanisms, to a more abstract approach, in the form of associations and categorisations. Systems theories take a very broad and often quite qualitative contextual view of creativity. In this sense, the focus is less on the particular static concepts themselves, but on the fit into the context of all the components that affect the potential or production of creativity.

*“The human mind once stretched, never goes back to its original dimension.”*

*Oliver Wendell Holmes*

### *The process*

The process of writing this thesis has helped to my understanding of the topic. By zooming out and reflecting about my experience of the last two years, I have understood the keys of the process of development that I have experimented. This kind of incubation phase has consequently helped the creation of connections up until now inexistent. The learning process I have gone through has transformed the way I understand reality in comparison to what I used to think two years ago. My preconceived purposes have not been fit, but a gradual discovery and growth of the purpose which I did not know has taken place instead.

### *Implications*

We all belong to a society that shares resources and that therefore makes its members dependent on each other. Social environment, that is education and culture, is the umbrella under which the potential of creativity may grow, since they establish the framework for information to be processed and interpreted. The choice of a particular value system tends to empower and enfranchise certain persons and limit the spread of other ways of living. This external limitation together with our inner ability to simplify the complexity of interconnected systems around us, limits our potential for creativity.

However, the potential for creation is always present. Since we all are in constant exchange of resources, the context is constantly changing. Such exchanges may take unlimited forms, from simple material trade to unconscious emotional contagion. The system in which we live is dynamic, and changes arise spontaneously and frequently produce something new. Consequently, change is a basic component of creativity and evolution. By focusing the attention on the processes that drive change, instead of on the end results, we can quickly identify the mechanisms behind those phenomena and react to them even before the produce an outcome. Taking change as a positive phenomenon from which one can get advantage, serves as a constructive attitude toward the world and human development..

## CONCLUSION

One of the key conclusions that after the elaboration of this project, is the discovery of the exponential growth potential of creativity. Individual realization of the personal potential and control over one's resources should be the starting point to reach social wellbeing. That could guarantee the development of structures and systems that stimulate constant creativity without the belief of extreme dependence on external resources. However, in order to achieve that goal, people also need to learn the importance of unconsciousness and its implications on behavior.

I have emphasized change as one of the most important concepts of creativity. There is no other way for creativity to flourish than to accept change. It is interesting to see the permanent presence of creativity in all the events exposed, from the moment one deals with new scenarios, to the moment in which a person has to imagine the future and consider how to get there.

This project aims at approaching an integrative view of reality of conscious and unconscious processes, with the ultimate goal of considering subjective exploration and learning as valid as rational and objective knowledge.

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## Appendix

### **The real story behind the case study**

Copenhagen's team, where I started my career in January 2016, was composed of the City Manager, another employee and myself. Besides, the team of freelance guides had around 18 members.

I joined the team with the aim of having some work at the same time as I was coursing my OIE studies at CBS. I started with a contract of around 15 hours per week, in which my role was basically customer service and tours coordination. The main complexity of my position strived in dealing with the guides, who were freelance and therefore did not share the same interests as the company, which provoked that every step forward that the company wanted to do had to be firstly negotiated with them, many times provoking conflict in first place and agreement at the end.

The three of us formed a very small team, being the City Manager the only qualified person to develop a local business in its initial stages. However, he quickly showed trust in his employees, even without providing with much training. He gave a high degree of decision making freedom to us, for the achievement of the goals that he set for each one of us. This management style made us feel independient but able to develop the tasks, and confident enough as to propose new ideas and projects and give feedback bottom-up.

By that time, I had little knowledge about how the company worked in the rest of the network and about the cost structure that Copenhagen operations represented for the rest of the company.

## ***November, 2016 - Crisis 1: New local leadership***

Some months had passed since the other employee had left the company and another one arrived to replace him. That left me as the most experienced team member after the main manager. The team had also added another person, an intern which was helping with the local administration work.

By November 2016, City Manager of the operations team in Copenhagen communicated officially and irrevocably that was going to quit in one month. Apart from the fact that he was very efficient in his job and that the business was at its best moment since it all started, there was nobody trained or ready to replace him. Sadly, he planned to leave in the beginning of December, the highest peak of demand that we had ever forecasted until then, Christmas 2016.

The first action undertaken by the company was sending the Regional Director to the city in order to analyse the situation. After several interviews of the RD with the manager about his resignation, all the employees and some of the lead guides, the Regional Director came up with a temporary solution. She offered a shared management position to the intern (who was quite familiar with the administrative issues) and myself, the person with the largest experience in operations at that moment. As we were not trained, the idea was to get the high season peak done with a close monitoring from another city provided by the RD. She also promised to find another City Manager once things would get back to normal in the low season. The idea was that this was going to be a temporal situation and that we were going to be monitored closely but from the distance, in order for us not to feel overwhelmed. At this point it is important to mention that both of us were still students and therefore had priorities other than work. In formal terms, the change translated into a little increase of salary (my position changed from Meeting Point Manager to Senior Meeting Point Manager) and an increase in the number of hours worked, 25 a week. The idea was also to receive progressive training, so we could both make the most of the experience and learn in an effective way.

## ***January 2017 to April 2017 - Crisis 2: Personal uncertainty***

The seasonal peak was overcome leaving great results, and even though I felt ready to continue, my priorities continued to be my studies, so I was still expecting news about the a new management team solution.

By this time of the year, the other person of the management team (the one in charge of the administration) and myself were feeling disappointed. Distant monitoring had been precarious and the promised training, inexistent. Also the isolation and poor communication with the rest of the network, besides the local team, increased that feeling even more, since the pessimist mood contagion was never stopped by supportive feedback from the headquarters of the company.

Personally, at a professional level I felt that I was not learning anything new, since I had mastered the operative role that I had been assigned. Moreover, my promotion had not been accepted happily by everybody. One of my coworkers that started in the company with the same role as I used to have before the change in the management team, was openly opposed to my way of running operations. This should not have been a big issue if the way of expressing it would have been constructive. This general new context was provoking me frustrating feelings that I tried to avoid by deviating the attention, but they were so emotionally powerful that I was inevitably affected by them.

I decided to provide some bottom-up formal feedback in order to report about the general situation since I was certain that, if this situation perpetuated for a long period, the whole team would be affected by our lack of energy and motivation.

I got two answers to my concerns. There was a one week-long Managers Training event programmed in spring to which we were both invited. Additionally, the RD also offered me a the possibility to move to Berlin in the beginning of April, and start there as Deputy City Manager, provided a previous training to be fully ready for the biggest demand peak of the year,

Easter. Berlin was the most important city in the network because of its revenue volume, so I accepted the offer happily.

### *March, 2017*

Copenhagen managerial team attended the Managers Training. That was a fantastic experience that allowed meet the rest of the people involved in this multinational company. At last we saw the real size and importance of the company in the sector, realizing that our city was just a very small part of the whole business, and actually one of the least profitable business units of the company.

That event made me feel part of something bigger. It made me feel that we belonged to something important and that we were taken into account. After that event, my mood improved much more and I felt that all what we were doing was being recognized and valued, not only by the local team, but also by the biggest part of the business in which big decisions are made.

On the other hand, my work colleague did not feel the same and continued to have a pessimistic attitude which was being transmitted to the rest of the team, who also communicated it to me. That turned out to be a self-fulfilling prophecy since all what she was afraid to live, but continuously “foreseeing” became truth. When she transmitted her concerns to the Regional Director as I had done previously, she was not offered any professional growth opportunity, which ended up with her quitting her position and leaving the tasks unattended the last weeks of her contract.

With one less person in the management team I was alone in my last weeks in Copenhagen. I was supposed to move by April 2017, but with all this situation it became clear that the company would need more time to find a good replacement for both positions. The main issue here was that I had prepared everything for a change of life that ended up being postponed 3 months.

The new candidate was going to be hired from outside, so even though they were going to hire a technically qualified person, that manager would need to learn about the organisation culture

from the beginning and get to know the team well enough as to be able to operate alone together with other two employees who had been in the company for less than 2 months. I was in the middle of this transition period, entering the high season and already thinking of my new life in Berlin. Nevertheless, I left everything ready to make the beginning of the new employee as easy as possible and prepare the whole team of 20 freelancers plus the employees to trust and be happy with the change. Consequently, during this period business development and performance was clearly negatively affected.

All this chain of events along the first 5 months of the year, together with my studies, affected my personal situation. That was a very difficult period in which my social life was considerably reduced, affecting my mood, health and well being. The stress I went through influenced my tendency to get sick more often.

### ***July, 2017 - Crisis 3: New life***

The challenge of this period is evident, I moved to another country. One of the main issues was already sorted, since I moved to Berlin because of a professional opportunity. Moving to a different country was not a totally new experience for me, but moving to Berlin was. I had to find a house and settle up at the same time as I had to start working with a new team in a new office, and in the middle of the summer in the busiest city of the network.

The new work environment was totally different. There was a much bigger team. The management team was composed by 5 people. The Regional Director (who is based on that city and which is a big support, since it is the most operationally complex city of the whole network); the City Manager whose age is 26, and 2 other Deputy City Managers, also very young. Out of the two other Deputy City Managers, one was professionally ready to undertake big responsibilities, although new in the company, so he had no experience in the know-how of operations. The other person with the same charge was there but lacked the professional preparation for it. He had reached that position thanks to the friendship with one of the top managers of the team. The team of employees is composed of 15 people and the team of freelancers has more than 70 members.

*December, 2017*

I am still working in this company and in the same team. The first period of this new phase was stressful and complicated, from being the only person in charge, I suddenly had 4 other colleagues over me. However, there has been a progressive adaptation to the new rules and I have learned a lot since I joined the team in Berlin. I am currently involved in an employees training program, collectively designed by my team, that aims at scalazing customer service skills training and other issues related to the position. I also collaborate with the business development strategy. Nevertheless, the innovative culture of this company still needs to be improved, since creativity is not given as much importance as it really has.