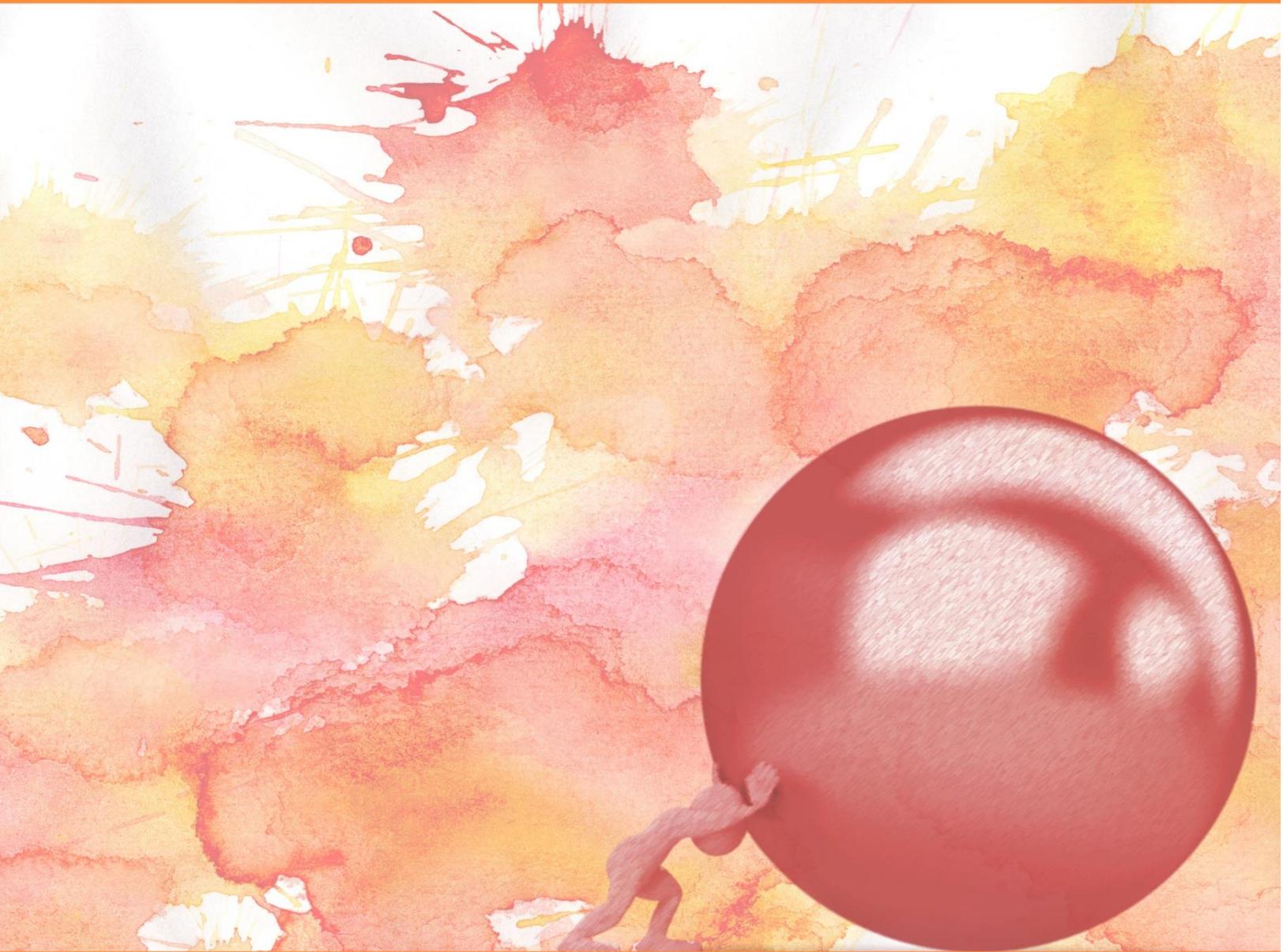


J.B. HATTINGA VERSCHURE

HOW THE CREATIVE BALL ROLLS

Exploring differences between contextual factors
influencing artistic and organizational creativity



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Student number: 350171

Supervisor: Dr. F. Brouwer

Co-Reader: Prof. Dr. A. Klamer

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A handwritten signature in a cursive, grey font, appearing to read 'J.B. Hattinga Verschure'.

Abstract

Creativity research has since long pondered over the question of whether only one type of creativity exists or multiple; and to date no conclusive answer has been found. This study aims to contribute to the discourse by drawing a comparison between the assumedly different types of organizational and artistic creativity in how they respond to contextual factors, by means of an interpretive study. Due to the fact that artistic creativity has been studied far less than organizational creativity, an exploratory study was performed into contextual factors influencing artistic creativity, for which interviews were conducted with artists. In a later stage the empirically found factors were compared to factors that were found in literature describing influence on organizational creativity. Findings of the study indicate that although the influence of certain factors is consistent, a variety of factors is distinctly different, evoked different responses or responses of a different magnitude. Based on this it is proposed that a meaningful distinction can be made between organizational and artistic creativity, implying that in fact multiple types of creativity exist.

Disclaimer

This master thesis was written as the final requirement to obtain the Master of Arts in Cultural Economics & Entrepreneurship at the Erasmus School of History, Culture and Communications, Erasmus University Rotterdam, The Netherlands. The copyright of this Master thesis rests with the author. The author is responsible for its contents. Erasmus University Rotterdam is only responsible for coaching and cannot be held liable for the content.

Preface

As the last thesis in a series of four (two bachelor theses, two master theses), writing this thesis felt as if creating yet another little piece of art: molding the subject into my own and applying my personal creative insights to it. When engaging in interviews with artists as the empirical part of the study, I fell in delightful wonder: a feast of unexpected recognition. It appeared that the aspects they described in relation to creating their art held so much resemblance to many of the aspects I myself have experienced in the thesis-writing process. The need to have a physical work environment that sets you at ease, having immersion and incubation time, getting into a state of flow at a certain moment at which the outside world seems to fade: all of those factors I experienced as well. This recognition gave me the realization that yes, indeed, this thesis is a piece of art: one that crowns and concludes my educational career.

In the thesis-writing process several people have been of great support to me. First of all, I would like to thank my thesis supervisor, Frans Brouwer, who has been extremely patient with me, has encouraged me and has brainstormed with me along the many side roads I explored before I chose my final path. Furthermore, I want to thank my thesis co-reader, Arjo Klamer, whose lectures sparked my interest in the subject of creativity in the first place. I also want to thank all my family and friends, who have stood beside me throughout my entire studies. In particular my parents: their love and support have been essential in my academic success. And Wessel: I am so happy we have been on this road together, you were a major support and I am so very happy and proud that we have now together reached our goal.

Table of Contents

Abstract.....	2
Disclaimer	2
Preface	3
Table of Contents.....	4
Table of Figures.....	7
Management Summary	8
1 Introduction	10
1.1 Research Background.....	10
1.2 Research Questions, Aims and Objectives.....	13
1.3 Research Delineation	14
1.4 Relevance	15
1.5 Outline.....	17
2 Creativity Research Context.....	18
2.1 Creativity Research Paradigms.....	18
2.2 The 4 P's	22
2.3 Big-C versus Little-c Creativity.....	24
2.4 What is Creativity? Issues of Definition	26
3 Creativity: Domain-Specific or General?	29
3.1 The Domain Specificity-Generality Debate	29
3.1.1 Arguments for Domain-Specificity.....	30
3.1.2 Arguments for Domain-Generality	32
3.2 The Middle Ground: Models Combining Specificity and Generality.....	34
3.2.1 Amabile's Componential Model of Creativity.....	34
3.2.2 Kaufman & Baer's Amusement Park Theory.....	35
3.2.3 Evaluation.....	36
3.3 Developing the Notion of Domain-Specificity.....	37
3.3.1 Defining Domains.....	37
3.3.2 Typologies of Creativity Based on Other Dimensions.....	40
3.3.3 Application to Current Study	42
3.4 Artistic Creativity.....	43

3.5	Organizational Creativity.....	45
4	Creativity and Contextual Factors.....	47
4.1	Press: The fourth P.....	47
4.2	Creative Climate in Organizations.....	50
4.3	Sensitizing Effect Current Study.....	53
5	Methodology.....	55
5.1	Positivism versus Interpretivism.....	55
5.2	Interpretive Qualitative Research.....	57
5.2.1	Klein & Myers' Seven Principles for Interpretive Field Studies.....	58
5.3	Validity and Reliability in Interpretive Research.....	60
5.3.1	External Validity.....	60
5.3.2	Internal Validity.....	60
5.3.3	Construct Validity.....	61
5.3.4	Reliability.....	62
5.4	Research Strategy & Design.....	63
5.5	Data Collection.....	64
5.6	Data Analysis.....	66
6	Analysis and Discussion.....	68
6.1	Analysis.....	68
6.1.1	Social Environment.....	68
6.1.2	Physical Environment.....	77
6.1.3	Resources.....	80
6.1.4	Reward & Recognition.....	83
6.1.5	Other factors.....	85
6.1.6	Cross-Discipline Analysis.....	89
6.1.7	Overview.....	91
6.2	Meta-Level Analysis: Applying the Hermeneutic Principle.....	92
6.2.1	The Pursuit of Creative Flow.....	93
6.2.2	The Inner Urgency to Create Art.....	95
6.2.3	Comparison with Organizational Creativity.....	97
6.3	Propositions.....	99
7	Conclusions.....	100

7.1	Answering the Research Question.....	100
7.2	Theoretical Implications.....	102
7.3	Practical Implications	103
7.4	Limitations & Recommendations for Further Research	104
7.4.1	Limitations.....	104
7.4.2	Further Research.....	105
7.5	Reflections.....	106
8	References	108
8.1	Literature.....	108
8.2	Respondents	114
9	Appendices.....	115
9.1	Appendix 1: Klein & Myers’ Seven Principles of Interpretive Field Research.....	115
9.2	Appendix 2: Interview Protocol Artistic Creativity.....	119
9.3	Appendix 3: The ten factors from Ekvall’s CCQ	121

Table of Figures

Figure 1: The Blind Men's Elephant - Http://Www.Threadless.Com/Play/Forum/Post/960025/The_Blind_Mens_Elephant_Wip/	12
Figure 2: The 4 P's Of Creativity Research	23
Figure 3: From: Amabile, T. M. (1983). The Social Psychology Of Creativity: A Componential Conceptualization	35
Figure 4: The Nine Muses - From Www.Imaginalinstitute.Com	37
Figure 5: Matrix Of Creativity Types - From Unsworth, K. (2001). Unpacking Creativity. P291	41
Figure 6: Amabile's Contextual Factors For Creative Climate In Organizations (Derived From Amabile, 1996)	52
Figure 7: Formulation Thematic Areas Interview Protocol	54
Figure 8: Hierarchy Environmental Factors Towards Flow	94
Table 1: Beghetto And Kaufman's Four C's Of Creativity, 2009, P8	25
Table 2: Different Domain Specifications	39
Table 3: Overview Of Amabile's Creativity Stimulants & Obstacles (1996)	51
Table 4: Overview Interviewed Artists	65
Table 5: Overview Comparison Factors Influencing Artistic & Organizational Creativity	91

Management Summary

Since the 1960's creativity research has taken an upsurge and the field has approached creativity from the different angles of creative person, product, process and press (contextual influences). As a result of the differing approaches, creativity research became somewhat fragmented. Each approach stayed rather isolated and took an almost 'parochial form.' Wehner, Csikszentmihalyi and Magyari-Beck (1991) compared the situation in creativity research to the fable of the blind men and the elephant, who each touched different parts of the animal and based on whichever part they touched made inferences about its whole, claiming they knew the one truth about the elephant. *"Though each was partly in the right and all were in the wrong"* (John Godfrey Saxe, 1816-1887).

One of the main criticisms to the general approach in creativity research, is the fact that creativity is often treated as a singular, homogeneous concept (Shalley, Zhou & Oldham, 2004; Unsworth, 2001, Sternberg, 2005). Critics of this singular-concept approach have been making small steps towards exploring the possible plural nature of creativity by advocating that creativity is domain specific rather than domain general. However, the debate is hindered by a plethora of both methodological and conceptual issues.

This study aims to make a contribution to this ongoing debate of whether creativity should be considered homogeneous or heterogeneous. It intends to do so by focusing on how two possibly different types of creativity behave in relation to environmental influences, rather than by trying to capture its essence. The two types of creativity central to this study are organizational creativity and artistic creativity. On organizational creativity much research has been done and thus a literature study suffices to determine factors of influence. However, this is not the case for artistic creativity and thus an empirical study was conducted to map the environmental factors that influence artistic creativity. Thus aims of this study are twofold: I) map the contextual factors influencing artistic creativity and II) contribute to the creativity-types debate. This has resulted in the research question: *"How do artistic creativity and organizational creativity respond to environmental factors and to what extent does this provide basis for a meaningful distinction between them?"*

In order to do so an interpretive study is conducted which takes the form of an exploratory, theory building qualitative study for the first aim of the study and a cross-sectional comparative case study for the second aim. Nine in-depth interviews were conducted with artists from various artistic disciplines to gain insight into contextual factors that influence artistic creativity. Factors that were found in the study

can be roughly divided in four general thematic areas: social environment, physical environment, resources, reward and recognition. Interestingly, no large differences were found across artistic disciplines. When the found factors regarding artistic creativity were compared to those known in literature in relation to organizational creativity, the conclusion was drawn that there were quite significant differences which led to the preliminary conclusion that artistic and organizational creativity do in fact respond differently to contextual factors.

A deeper level of analysis then focused on the underlying themes that were affected by the environmental influences in order to gain understanding on why these were so specifically important. It was found that there were two main underlying principles that were related to almost all contextual factors: artists' pursuit of creative flow and the inner urge that drives artists to create art. These two principles are based on process related theories and thus extend beyond the initial scope of this study. As the indication for a connection between process and pressure was so strong in the data, it was inevitable to include this aspect in the study. The theory used to ground the findings in were those by Csikszentmihalyi on creative flow and on his conceptualization of the human drive to be innovative as the result of evolution.

The literature study into factors influencing organizational creativity did not provide the same level of insight into underlying principles, making it difficult to come to a conclusive answer to the question of difference between organizational and artistic creativity. However it is conceivable that the two principles found in relation to artistic creativity are different in an organizational setting. With regard to the pursuit of creative flow, the distinction can be made that for artists creativity is their core activity, while in organizational creativity this is often not the case. Artists thus have to find a purely creative flow, while in organizations a state of flow can be perceived as more of a 'workflow.' Furthermore, the inner drive of artists to be creative and their struggle to activate themselves in doing so is also less applicable in an organizational setting as organizational creativity occurs from an already active (work) setting, rather than from a state of entropy. This is again related to the fact that creativity is not the core activity.

Despite the limitations in carrying out a comparison at a deeper level, the findings of the study do indicate that although the influence of certain factors is consistent for organizational and artistic creativity, a variety of factors is distinctly different, evoked different responses or responses of a different magnitude. Based on this it is proposed that a meaningful distinction can indeed be made between organizational and artistic creativity, implying that in fact multiple types of creativity exist.

1 Introduction

1.1 Research Background

Before 1950 the subject of creativity was rarely addressed in research. For a long time the concept was simply labeled a divine matter not meant for mankind to fathom. Later on, it was considered implicit to the greater concept of genius or intelligence and was therefore not studied as a separate phenomenon (Runco & Albert, 2010; Kaufman, 2009; Sternberg & Lubart 1999). Although great thinkers like Plato, Freud and Einstein philosophized on the topic and some researchers discussed it in the context of other research, no true empirical studies had been conducted on creativity and therefore very little was known about it (Kaufman, 2009).

In 1950 Joy Paul Guilford gave a seminal presidential address at the American Psychological Association convention, pointing out the severe neglect of creativity in psychology research. In the preceding 23 years, of the 121.000 articles published in the domain of psychology, a mere 186 addressed the topic of creativity: less than 0,2 percent (Guilford, 1950). Guilford stressed the social importance of the subject and urged the academic world to devote more studies to it. Furthermore, Guilford contributed greatly to the domain by proposing a model by means of which creativity could be studied empirically. Guilford's Structure of Intellect model maps 120 mental abilities along three dimensions: operations, content and product. One of those operations is 'divergent thinking': the ability to generate responses to questions that have no singular, set answer (Guilford, 1967). The concept of divergent thinking and the attributes of it, formed the foundation for many creativity measuring tests, such as the Torrance Tests of Creative Thinking (TTCT) (Kaufman, 2009).

With his address Guilford meant to stir some minds to motion and this is exactly what he achieved. Not only did he advance the domain by setting the tone for empirical research, he also turned creativity into an eminent domain that was accepted to study. In the following years creativity research picked up and started its development towards becoming a true 'hot topic' in many different research areas. The domain now spans across the fields of cognitive psychology, education, neuroscience, business and more (Kaufman, 2009). Creativity is being studied in terms of the creative person, process, product and environment (often called press). These many different approaches also mean that research is moving in many different – not necessarily concurrent – directions. Each approach stayed rather isolated and took an almost 'parochial form.' Wehner, Csikszentmihalyi and Magyari-Beck (1991) compared the situation in

creativity research to the fable of the blind men and the elephant, who each touched different parts of the animal and based on whichever part they touched made inferences about its whole, claiming they knew the one truth about the elephant. *“Though each was partly in the right and all were in the wrong”* (John Godfrey Saxe, 1816-1887).

One of the criticisms to the general approach in creativity research, is the fact that creativity is treated as a singular, homogeneous concept (Shalley, Zhou & Oldham, 2004; Unsworth, 2001, Sternberg, 2005), or to speak with the metaphor of the Blind men and the elephant: as one animal. This would imply that creativity always responds to and is triggered by the same cues and functions in the same ways, regardless of the nature of the task at hand. It is questionable whether this assumption can be held adequate in the many forms of creativity research taking place. Critics of this singular-concept approach have been making small steps towards exploring the possible plural nature of creativity by advocating that creativity is domain specific rather than domain general. However, the debate is hindered by a plethora of both methodological and conceptual issues. Questions like how to objectively determine whether or not something can be considered creative, how to measure creativity and how to distinguish useful domains, stand in the way of addressing the specificity-generalizability issue.

Yet, despite the fact that the possible plurality of creativity has not been clearly decided upon, different types of creativity such as artistic and organizational creativity are referred to in literature. These studies thus implicitly assume that such distinctions can be made, but neglect to justify the specification of a type of creativity. But what if organizational creativity is in fact a different type of creativity than for instance artistic creativity? To what extent can the knowledge on organizational creativity be applied to artistic creativity? Very little attention is paid to the question of how these types of creativity might behave and respond differently.

Cross comparison between these assumedly different types of creativity can contribute to the debate on generality versus specificity, because although it may be difficult to address the question in a direct manner, a pragmatic approach through inferences may be able to provide part of the answer. If the different types of creativity behave in different ways, then would this not be an indicator of the existence of plurality in creativity and vice versa?

A challenge in this respect is that research in the different creativity areas is somewhat skewed. The fact that the motives for exploring the phenomenon of creativity were often economic in nature triggered creativity research mostly in the context of organizations. This has resulted in the fact that quite a large

body of literature exists on creative process, person and particularly press (environment) with regard to organizational creativity, yet other research areas lag behind. Whereas the issue of creativity enhancing environments has been researched in relation to organizations quite extensively, hardly any such research exists in relation to artistic creativity. Research in this field can thus contribute in multiple ways. It can explore the influence of environmental factors on artistic creativity and with that broaden the scope of knowledge. At the same time, research outcomes can deepen the understanding of the nature of creativity – whether it be singular or plural.

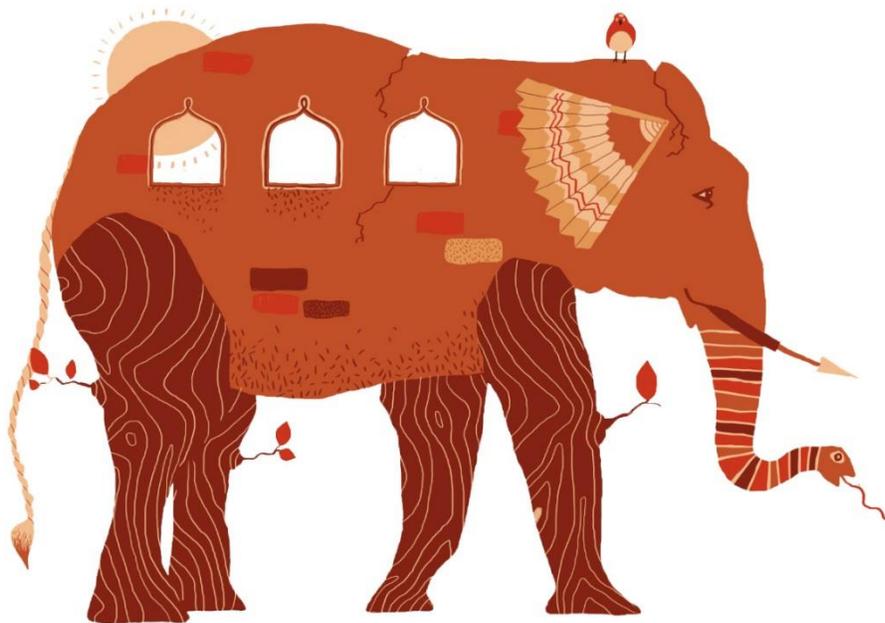


Figure 1: The Blind Men's Elephant - http://www.threadless.com/play/forum/post/960025/the_blind_mens_elephant_wip/

1.2 Research Questions, Aims and Objectives

As has become apparent from the above background description, there is a need for research on differences within the concept of creativity. This study aims to contribute to building up the body of academic literature on the topic of creativity by on the one hand exploring the area of environmental influences on artistic creativity and on the other hand by contributing to the debate about the domain generality or specificity of creativity. In order to do so, this study aims to produce several propositions that can be subject of extensive empirical testing in future research. The aim is thus to both broaden the base of knowledge on different types of creativity and deepen the knowledge on the nature of creativity.

Corresponding to these aims, the following objectives can be specified:

- To identify the main environmental influences on artistic creativity
- To determine to what extent these factors differ from those influencing organizational creativity, and
- To make an inference about a possible difference between organizational and artistic creativity based on the way they respond to environmental factors

Based on these objectives the following main research question can be formulated:

“How do artistic creativity and organizational creativity respond to environmental factors and to what extent does this provide basis for a meaningful distinction between them?”

In order to answer this main research question, several sub-questions can be formulated which will provide a logical roadmap for the research. These sub-questions are:

1. What are the arguments for domain-specificity or -generality with regard to creativity?
2. Which environmental factors influence organizational creativity?
3. Which environmental factors influence artistic creativity?
4. In what way do influential environmental factors overlap and differ for organizational and artistic creativity?

1.3 Research Delineation

The approach chosen in this study is to make an inference about the nature of creativity based on the way it responds to environmental factors. A similar approach could have been chosen by taking the creative person, process or product as a basis for comparison. The reason this study focuses on the 'press' or environmental factors, is twofold.

First of all, the body of literature on the topic of environmental factors influencing creativity is quite well-developed. Especially in the area of organizational creativity. From this it follows that the particular research area of environmental influences on creativity lends itself well for the envisioned research approach. Existing frameworks on creative climate in organizations can be used as sensitizing theories for the development of interview protocols. Furthermore, findings from the empirical research can be compared to the existing knowledge in order to answer the main research question.

Second of all, the focus on environmental influences on creativity naturally developed in the course of the process of research question formulation. Previous research performed by the researcher was focused on the interplay between an intercultural workforce and the creative climate on organizations (Hattinga Verschure, 2012). Familiarity with, and interest in the subject led to an exploration of possibilities to work with the concept of creative climate again. In combination with the researcher's interest in the domain specificity versus generality debate, this eventually led to the formulation of the current research question and research delineation.

1.4 Relevance

Earlier in this chapter it has been made clear that research into creativity has taken an upsurge since the 1960's. A recent development is the criticism that has arisen on the assumption that creativity is one, homogeneous concept. Critics call for a revision of this assumption and for further research into the possible plural nature of creativity. The willingness to reconsider assumptions and the pursuit of refinement of existing theory is of one of two key elements that shape progress in any scientific field, according to Lachs (1991). He states: "We must use our research to build a cumulative body of evidence, and we must be willing to revise and restructure our understanding of the phenomenon based on the available evidence and extant theory." (p45) This underlines the academic relevance of this study, as it aims to contribute to the debate surrounding a possible revised understanding of creativity.

Traditionally, researchers in the field of creativity have sought to understand creativity as a general phenomenon. However discussions on for instance scientific versus artistic creativity reminds us that this one size fits all approach may not apply in studies of creativity because different types of problems and different kinds of task demands may call for different backgrounds, skills, cognitive strategies, and motivations. This has three implications: investigators must specify models with reference to available task types, problem types, person types and setting. Secondly, we need to build taxonomic systems that allow us to recognize these similarities and differences with regard to task types, problem types and other factors. Thirdly, these taxonomic efforts should be used to frame theory development, integrative efforts and critical comparative tests, providing a reference point to contrast observed similarities and differences in our substantive findings (Mumford, 2003; Fleishman & Quaintance, 1984; Guilford, 1970).

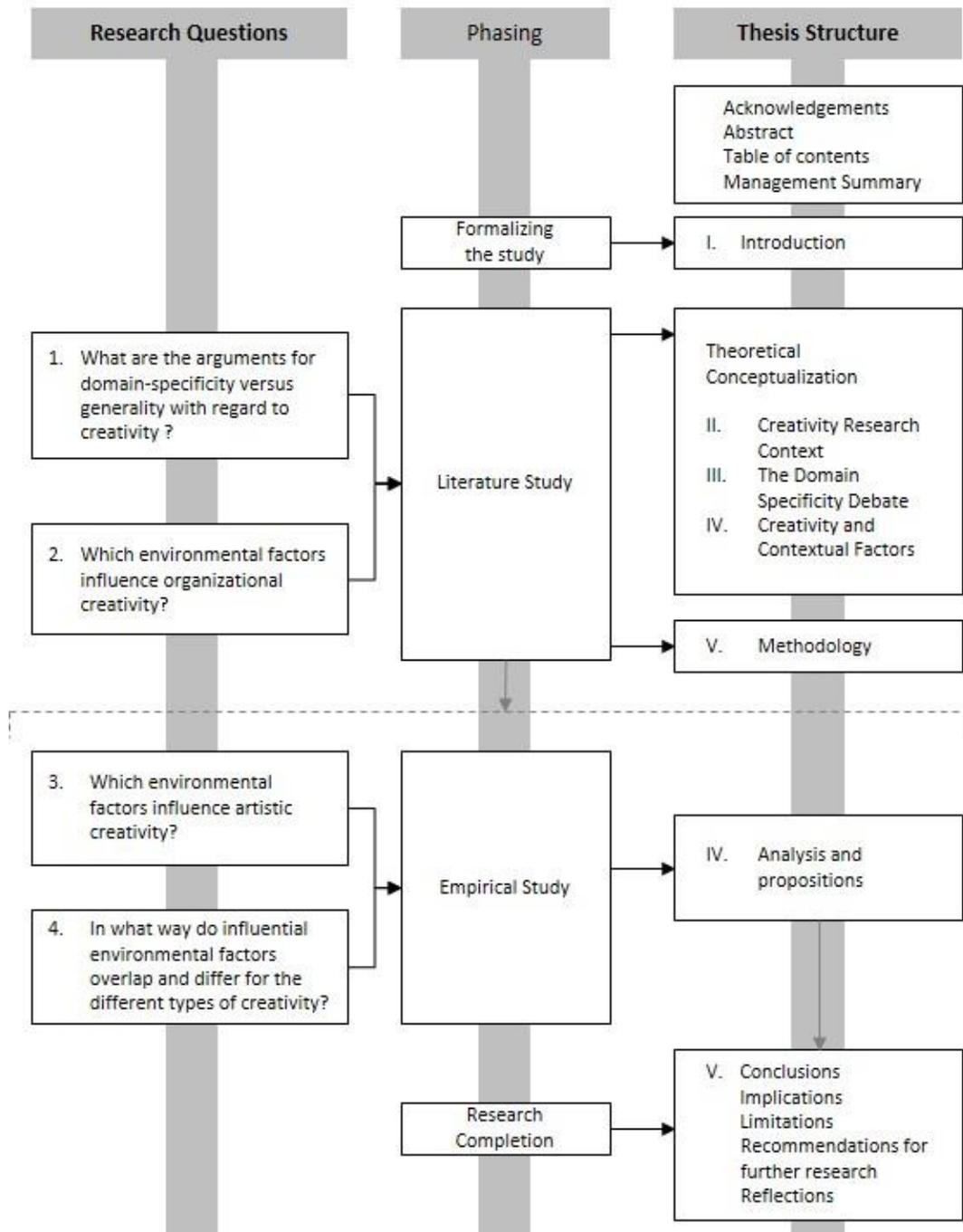
The question of domain specificity versus generality has thus far proven difficult to answer which has somewhat numbed the debate. However, as Baer (2010) pointed out that "a lack of complete clarity does not mean that efforts [...] are unimportant." (p321) and that "a better understanding of the different contributions of domain-specific and domain-general factors to creative performance can help us better understand, assess and nurture creativity" (p321). Mumford mentions that "some topics, such as the demands of practical innovation, cross-field differences in the nature of creative thought, and the effects of creativity on people and social systems need more thorough treatment" (Mumford, 2003, p107).

It is thus evident that in order for the research of creativity to progress it is desirable to invest in the development of taxonomies in creativity. This study aims to explore a part of the creativity landscape in order to partially enlighten a blind spot.

The value of creativity research has also been emphasized clearly in the study program of the Master Cultural Economics and Entrepreneurship, for which this research paper forms the final requirement. Through courses such as 'Creativity and the Economy' the concept of creativity and its greater impact on the economy and society were studied. In that context, this study is thus relevant as well. Cultural economics & Entrepreneurship addresses creativity of artists, the art they produce and the management of the art world in which they operate on the one hand. On the other hand also creativity in an organizational setting is addressed, related organizational culture and the impact of the presence of creative professionals in cities, creating 'creative cities' (Florida, 2004). This study addresses both artistic creativity and organizational creativity and this stands right in the middle of the discipline of cultural economics.

1.5 Outline

In order to answer the formulated research question and sub questions, both literature study and empirical study will have to be conducted. The figure below gives an overview of the outline of this thesis and the way in which the different sub questions are connected to the different chapters via different research approaches.



2 Creativity Research Context

Creativity research has lived through an enormous upsurge over the past decades. Research has been done in many different fields and with many different approaches. This is inherent to the complexity of the phenomenon and is thus a necessity in the process of elaborate study (Mumford, 2003; Mumford & Gustafson, 1988). It has caused several parallel tracks of development that have intersected at some points and seem to diverge at others.

This chapter will therefore first attempt to broadly draw out the landscape of creativity research in order to provide for a basic foundation on which further literature review can build. This literature review however, does not aim to be exhaustive, since that reaches far beyond the scope of this thesis and there are several excellent handbooks that already do so.

In the course of the years, creativity research has lived through several paradigms and has seen the development of different research approaches in terms of methodology, definitions used and aspects studied. Although the approaches overlap in some cases, they do provide somewhat of a structure to go by when reviewing creativity research and helps touch upon many of the most important topics.

2.1 Creativity Research Paradigms

In the 'Handbook of Creativity' (1999) Sternberg and Lubart describe six paradigms that have – often simultaneously – developed in creativity research since the 1960's and the ways in which these have limited or advanced development. The mystical approach is the first one they describe. Early conceptions of creativity were often based on mystical beliefs. Creativity was for instance believed to be prompted by divine or demonic intervention: not the creator, but a higher mystical power was considered the force behind creativity. These mystical explanations for creativity have had a negative effect on creativity research because for a long time it was not considered a concept worth researching; it was not taken seriously. Sternberg (1988) compared creativity to love in this respect: it is considered something spiritual and therefore "doesn't lend itself to scientific study." (Sternberg & Lubart, 1999, p5)

Another paradigm that has not quite benefitted scientific study of creativity, is the pragmatic approach. With the recognition of creativity as an important business instrument, popular literature on the topic has emerged on a large scale. Although this has brought the subject much attention, the popular literature

seemed more focused on developing creativity, rather than on doing empirical research and testing validity of assumptions. This does not necessarily mean that things written about creativity in popular literature are invalid, however it might cause associations of the topic with commercialization, causing it to be considered even less of a science worthy subject.

The psychodynamic approach is mentioned by Sternberg and Lubart (1999) as the first main theoretical approach to creativity of the 20th century. It is based on the idea that creativity is the result of tension between reality and unconscious drives. These unconscious drives could be wishes for reality such as power or fame, or could also be the result of so-called unmodulated thoughts stemming from dreams, psychoses or intoxication from drugs. The idea that the unconscious plays an important role in the process of creativity is still the base for some current theories, however the psychodynamic approach never turned creativity into a mainstream research area. One of the reasons for this is the fact that it was very difficult to measure the constructs underlying psychodynamic theories. Mostly case studies were used, which was criticized for susceptibility to selection and interpretation biases. It did not fit in with emerging scientific psychology and therefore once again kept creativity research from becoming mainstream.

On the other hand, a very important paradigm for creativity research is the psychometric approach. For a very long time one of the main obstacles in creativity research was the seeming impossibility to measure it. As mentioned earlier, Guilford caused a break-through in this regard by proposing that creativity could be measured by letting respondents carry out tasks requiring divergent thinking of which the outcome was measurable. This approach inspired many new studies and thus contributed to the advancement of the creativity research field. It enabled scientists to study creativity as it was occurring, using an “objectively scorable assessment device” (Sternberg & Lubart, 1999, p7), rather than analyzing great creative conceptions from the past. However, criticism also arose. Some scientists argued that these measurable tests were inadequate and could never account for all the factors involved in great complex creative processes.

Cognitive approaches to creativity form another stream of research. It studies the cognitive processes that form the base of creative thinking and the several phases that might occur in these processes. The cognitive approach argues that creativity is the result of ‘normal’ cognitive processes that yield extraordinary results. One can for example think of a study Duncker (1945) performed where respondents were asked to attach a candle to a wall with only certain given objects. According to the cognitive approaches, creative insight results from the interaction between cognitive processes and stored knowledge. This results in two distinct cognitive phases: the generative phase and the exploratory phase.

In the generative phase mental representations are constructed that facilitate the creative process, while in the exploratory phase these mental representations are used to generate creative ideas, aided by cognitive processes like association, synthesis and transformation. The cognitive approach has also pursued experiments with computer simulations, where programs were developed to let computers reinvent basic science laws, making use of heuristics.

Parallel to the cognitive approach, the social-personality approaches to creativity emerged. These approaches study personality traits of creative persons, the role of motivation in creativity and the influence of socio-environmental factors. Research in this area has attempted to link specific personality traits to creativity. Sternberg and Lubart (1999) report that such traits that have been found are “independence of judgment, self-confidence, attraction to complexity, aesthetic orientation and risk-taking.” (p8) Other studies have studied the role of motivation in creativity and have found that intrinsic motivation has a positive influence on creativity (Amabile, 1983a). The reverse also appeared to be true: being creative and having the creative product positively assessed will lead to increased motivation (Sternberg, Ferrari, Clinkenbeard & Grogorenko, 1996). Socio-environmental influences on creativity also formed an important part of the socio-personality approach. Studies in this area have shown the responsiveness of creativity to environmental factors such as culture, available resources, competition, etc. (e.g. Simonton, 1984, 1988; Lubart, 1990)

Both the cognitive and social-personality approaches have been very important to creativity research, but were rarely used together. Wehner, Csikszentmihalyi and Magyari-Beck (1991) determined that each approach stayed rather isolated and took an almost ‘parochial form.’ They compared the situation in creativity research to the fable of the blind men and the elephant, who each touched different parts of the animal and based on whichever part they touched made inferences about its whole, claiming they knew the one truth about the elephant.

The latest paradigm in creativity research seems to end this isolation of research approaches. The confluence approaches to creativity research propose that in order for creativity to occur, various components have to converge. Within this stream of research several combinations of factors - such as personality traits, cognitive processes, knowledge and affect - have been explored for their impact on creativity. Sternberg and Lubart (1999) state that:

“With regard to the confluence of components, creativity is hypothesized to involve more than a simple sum of a person’s attained level of functioning in each component. First, there may be thresholds

for some components (e.g. knowledge) below which creativity is not possible, regardless of the levels attained on other components. Second, partial compensation may occur in which a strength on one component (e.g. motivation) counteracts with a weakness on another component (e.g. environment). Third, interactions may also occur between components, such as intelligence and motivation, in which high levels on both could multiplicatively enhance creativity.” (p11)

2.2 The 4 P's

Regardless of the paradigm, creativity has always been subject to different conceptions about its nature. The question of 'wherein lies the true creativity?' has been answered from four main perspectives. These perspectives believe creativity to be residing in the creative person, process, product or press (environment). Corresponding to the conceptions about the nature of creativity, different aspects of creativity have been studied and different standpoints have been developed.

In 1961 Rhodes confirmed and explicated this distinction by performing a study of definitions used in studies on creativity. He collected 56 definitions and found that many of them were different, but not mutually exclusive. They were rather complimentary and formed four different tracks of research, each representing a different component of the greater whole of creativity: Persons, Process, Products and Press, the 4 P's of creativity. Each of the P's has what Rhodes calls a 'unique academic identity' but they serve the concept of creativity functionally only when considered together.

The first P – Person - covers all research related to creativity as a trait in a person. In this field many studies have been conducted into the relationships between creativity and intelligence and between creativity and personality. Contrary to earlier conceptions, studies in high IQ children, done by Terman (1925), Hollingworth (1942) and Thurstone (1941), found that high intelligence does not automatically imply creativity. In fact, children with high intelligence were often found to lack substantial creativity. This would counter the statement that creativity is an empty term because of equality to intelligence.

The second P, Process, pertains to the studies of mental processes involved in creating, such as "motivation, perception, learning, thinking and communicating" (Rhodes, 1961, p308). This stream of research assumes that creativity emerges out of a specific process and is thus something that everyone is potentially able to achieve if the process is mastered. One of the best known theories from creativity process studies is that from Graham Wallas (1926) on the stages involved in the creative process: preparation, incubation, inspiration and verification. The preparation phase consists of gathering information through various channels. This gathered information is then reflected upon in the incubation phase. An important aspect of this phase is also letting the information and thoughts rest and settle; it is claimed that part of the workings in this phase happen subconsciously and that this is crucial to the occurrence of inspiration. Inspiration is thus the actual conception of a new idea, in which gathered information and developed thoughts lead to a novel insight. The final stage from Wallas' theory is that of

verification in which the conceived concept is turned into an articulated form. The notion that the nature of creativity lies in processes has led to the emergence of many trainings, classes, workshops etcetera to teach individuals and organizations to think creatively.

Another way of studying creativity is through studying creative products, where ‘products’ should be perceived in a broad sense. As Rhodes (1961) states: “When we speak of an original idea, we imply a degree of newness in the concept. When an idea becomes embodied into a tangible form it is called a product. Each product of a man’s mind or hands presents a record of his thinking at some point in time” (p309). This means that through studying a creative product, it is possible to derive some of the thinking that led up to its conception.

The final P, called Press by Rhodes, represents the stream of research that deems it impossible for the nature of creativity to lie completely within the individual; for each individual cannot be seen detached from his context. Press thus stands for the environmental influences on the creative individual as well as the creative process. Creative individuals are shaped by their environment, both in growing up and in functioning. Contextual factors can influence processes and therewith influence the likelihood of occurrence of creativity. Following this stream of thought, a creative climate can potentially stimulate creativity. This last P is central to this study and will be elaborated on later.

All P’s stand in connection with one another and can be studied at their intersections, see figure 1. One such example is studies into the influence of education and encouragement at a young age on creativity in adult live, where person and press come together.

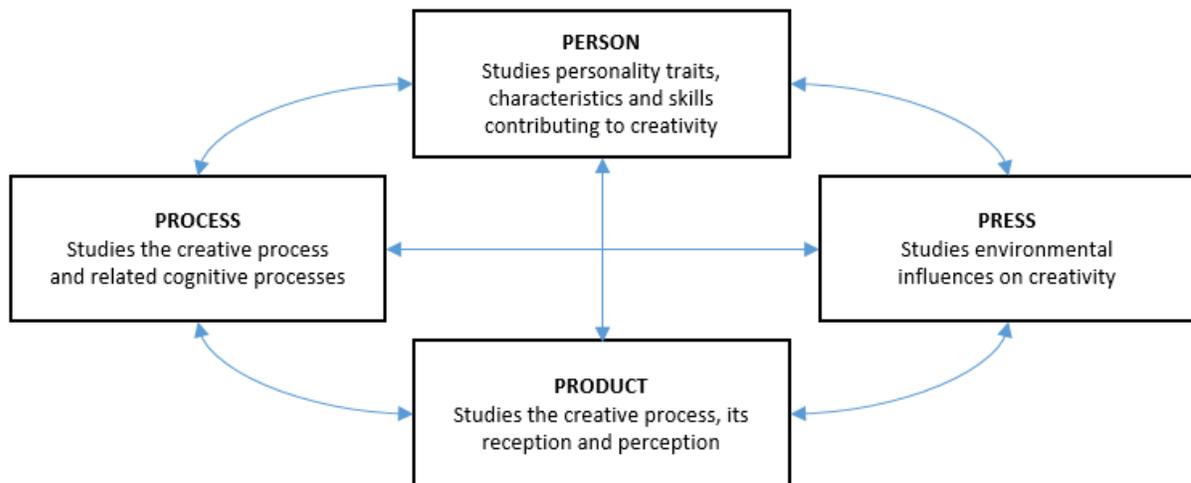


Figure 2: The 4 P's of Creativity Research

2.3 Big-C versus Little-c Creativity

Apart from a distinction in aspects of creativity, another important distinction is made in creativity research, which is related to the magnitude of the creativity being studied. Over the past 60 years, much of creativity research has focused on undisputable examples of creativity, such as major scientific breakthroughs or widely acclaimed works of art (Runco, 2004). But if examples of such eminence are considered indisputably creative, then what about the everyday, normal-life type of creativity? The type of creativity that may not be world-changing, but may still be highly relevant in its everyday context? To this end, researchers have acknowledged that creativity can occur on genius, domain-changing level as well as on the everyday level. The distinction between the two is indicated by the terms Big C creativity and little c creativity. In the course of the years different studies have been dedicated to these two specific ends of the spectrum.

With regard to Big-C creativity, there are two large advantages: first of all, whether or not creativity did actually occur is never a question, it is a given. Second of all, data is often readily available when it comes to genius-level creators (who have often passed away already). This makes Big-C creativity research particularly suitable for historiometric studies. Simonton performed many of such historiometric studies on eminent, well-known creative figures. One study (1977) focused on famous composers such as Beethoven and Mozart, on the relation between their productivity and the quality of the work they produced. He found that their best work stems from periods in their lives when their creative production rates were highest. He found the same to be true for prominent psychologists - among whom two Nobel Prize winners (1985). Simonton's main finding was thus that quality in fact is in fact related to quantity.

When considering little-c creativity, it can be said that this type of creativity lends more possibilities for gathering new data and performing tests. Little-c studies often make use of college students or children as respondents to test their creative behavior (Kaufman & Beghetto, 2009). Any of the creativity tests, such as the Torrance Test of Creative Thinking (TTCT) study little-c creativity. The central question in many little-c studies is which role creativity plays in everyday life, what induces it and how it can be enhanced, for instance in organizational settings (Amabile, 1996).

It must be noted that the two categories are heavily skewed. Big-C creativity only applies to a relatively very small group of people who make it to the level of acknowledged genius. All other forms of creativity are considered little-c. Kaufman and Beghetto (2007, 2009) therefore argued that the Big-C, little-c

distinction is too limited and introduced the concepts of mini-c and Pro-C. Here mini-c refers to the type of creativity that is only creative to a person's own experience and possibly not to others. For instance a hobby-chef trying out a combination of new ingredients. The concept of Pro-C pertains to the persons who are creative at a very high level, but who may just not have made it to world fame. Their creative accomplishments may have been extremely specific to a domain, or may have contributed to modest new insights. Therefore they may not have made it to Nobel Prize level, but have most definitely transcended the level of little-c creativity. In table 1 below an overview can be found of the four C-levels distinguished by Beghetto and Kaufman (2009).

With the notion of creativity existing on different levels of magnitude also comes the fact that certain theories that have been developed pertain more to one type than the other, and sometimes can apply to both. This is an important factor to take into account when considering theories in the research field.

This particular study aims to develop an insight that may possible be applicable across different magnitudes of creativity. However, due to the chosen approach and due to practical limitations respondents in the study are mainly from the little-c and Pro-C level.

Table 1
Four C's of Creativity Matched up to Issues in the Field

	mini-c	little-c	Pro-c	Big-C
Best assessment?	Self-assessments microgenetic methods	Teacher/parents/peer ratings psychometric tests (e.g., Torrance tests,) consensual assessment	Consensual assessment citations/peer opinions prizes/honors	Major prizes/honors historiometric measures
Domain-specific or general?	Likely both	Likely both	Mostly domain- specific	Domain-specific
Best motivation?	Probably intrinsic	Probably intrinsic	Both contribute	Both contribute
Relation to mental illness?	Probably none	Believed, but likely very little	Evidence suggests links, dependent on domain	Some evidence to suggest links
Example of researchers	Mark Runco	Ruth Richards	Greg Feist	Dean Simonton

Table 1: Beghetto and Kaufman's Four C's of Creativity, 2009, p8

2.4 What is Creativity? Issues of Definition

As the chapter has shown so far, creativity research is far from unambiguous. There are many distinct research streams, each with its own conceptualization of creativity and with its own corresponding research approaches. Whether studying the process involved in Big-C creativity in rocket science using a cognitive approach, or studying the environment in elementary schools for little-c creativity through the social-personality approach: it all claims to study 'creativity.' Despite of – or possibly due to – the many different approaches, coming to consensus on a definition of creativity has proven very difficult and has led to much ambiguity (Mumford & Gustafson, 1988)

In fact, many creativity studies simply omit a clear definition altogether. Plucker, Beghetto and Dow (2004) performed a study into the definitions used in academic articles. They selected 90 articles, most of which came from top creativity journals or otherwise highly valued journals. Plucker et al. found that of the articles they studied, only 38% defined what was meant by 'creativity'. Articles addressing creativity in non-creativity journals scored even lower, with 33%. Kosslyn (1980) has argued that it is not always necessary to have a clear definition of something in order to be able to study it, as it cannot be expected that it is possible to form such clear definition of something about which little knowledge exists. However, Amabile (1996) argues that this may indeed be the case for creativity, as research has not advanced to the point where a precise, universally applicable definition can be formulated. However, she also points out that this cannot be an excuse for not attempting to develop one.

Apart from difficulties stemming from the fragmented research, some critics also have problems with the linguistics of the term. Jacques Barzun (1960) argued that 'creative' is an empty term that is treated either as a complex, demarcated mental process, while it is simply referring to phenomena that we actually already know, such as intelligence; or as a term to signal mere disbelief and denial of the factual range of human capabilities. In 1961 Mel Rhodes acknowledged the fact that the term creativity was often used too loosely and that creativity research was disorganized. Rhodes: "In many examples 'creative' means or implies nothing more than emotional freedom, relaxing of tensions, disinhibition, or freedom of censorship. [...] What is happening here is that a word which should be reserved to name a complex, multi-faceted phenomenon is misused to name only one part of a phenomenon." (p306)

All these difficulties surrounding the definition of creativity, are indicative of the veil of uncertainty that still hangs around the subject. In order to bridge the difficulties, Amabile (1996) sought to develop a

consensual and operational definition of creativity. She points out that due to the different research stream of the four P's, definitions have been developed based on the creative process, person and product. She argues that at this point "the definition that is most likely to be useful for empirical research is one grounded in an examination of products." (p31) As characteristics related to person or process are as of yet too difficult to measure and operationalize. She aims to develop "an explicitly operational definition that implicitly underlies most subjective assessment methodologies" (p31). The operational definition that Amabile consequentially formulates is:

"A product or response is creative to the extent that appropriate observers independently agree it is creative. Appropriate observers are those familiar with the domain in which the product was created or the response articulated. Thus, creativity can be regarded as the quality of products or responses judged to be creative by appropriate observers, and it can also be regarded as the process by which something so judged is produced." (p31)

Amabile acknowledges that this definition of creativity is based on subjective criteria, but she states that for the purpose of empirical research this is appropriate. Although it may be possible to determine certain objective criteria, these would be difficult to apply universally. Her aim of a consensual definition is to conceptually attach creativity to its assessment methods. Amabile furthermore states that several assumptions accompany this operational definition of creativity. These are the following.

The assumption that:

- Products or observable responses are the hallmark of creativity
- It is not possible to determine beforehand which objective characteristics of a product will be considered creative
- Criteria for creativity require a social context that is historically determined
- Creativity is something people often recognize, even without clear definition or delineation
- There is one basic quality of products that is recognized by observers as 'creative' and thus there is one basic form of creativity. (p32)

Amabile accompanies the operational definition with a conceptual definition:

“A product or response will be judged as creative to the extent that (a) it is both a novel and appropriate, useful, correct or valuable response to the task at hand, and (b) the task is heuristic rather than algorithmic.” (p33)

Despite the variation in definitions that used in creativity research, they all seem to be concerned with the production of novel and socially valued products (Mumford & Gustafson, 1988; Taylor, Smith, & Ghiselin, 1963). Amabile’s conceptual definition thus gained wide support over the years. Plucker et al. (2004) capture this definition, as well as the various aspects of it being studied, in the following manner:

“Creativity is the interaction among aptitude, process, and environment by which an individual or group produces a perceptible product that is both novel and useful as defined within a social context” (p. 90).

This study takes on Plucker’s formulation of the definition as developed by Amabile. However, one remark must be made on one of the assumptions underlying the definition: the assumption that there is one basic form of creativity. The research question central to this study revolves around the issue of whether this ‘one basic form’ of creativity can be held true. However, the fact that the definition includes a contextual aspect makes the definition acceptable nonetheless, as the contextual aspect could essentially refer to a type of creativity. In other words: even when dismissing this one assumption, the definition would remain useful.

3 Creativity: Domain-Specific or General?

One of the fiercest debates in creativity research since the emerged interest in the 1960's is the debate on the question of whether creativity is domain specific or domain general. In other words: does a single universal creativity exist that can be applied in any domain? Or are there different kinds of creativity that each are specific to a certain domain? Each end of the spectrum has a vast group of adherents that claims solid evidence for its proposition. In this chapter the arguments and evidence for both domain-general and domain-specificity will be addressed, along with the weaknesses on either side.

The chapter will continue by elaborating on a middle-ground standpoint: several theorists have proposed that creativity possesses both domain general and domain specific elements. Although this viewpoint does not answer all questions, it appears a promising direction to bring the two opposing camps together while honoring their individual values.

Following from the reasoning that creativity should have all or some domain specific characteristics, several academics have attempted to define different types of creativity. Some used domains as the base for the distinction while other chose various general dimensions. Some of these typologies will be briefly described, before zooming in on the thematic area chosen as the focus for this particular study: artistic creativity and organizational creativity.

3.1 The Domain Specificity-Generality Debate

Since the upsurge of creativity research in the 1960's, studies at first focused mainly on issues of definition and defining the boundaries and possibilities of the research field. In developing a useable definition, the focus was to cover as much ground as possible and create a definition that would fit in the many different situations in which creativity could occur. This implied that creativity was approached as a universal concept. Early tests to measure creativity such as the Torrance Test of Creative Thinking (TTCT) also all assumed domain generality (Baer, 2010 in Cambridge), which guided early approaches to creativity research.

Baer (2010) points out that when considering common usage of the term 'creativity' domain generality seems evident, as the word 'creative' is used in a very general matter. Whereas words like 'skillful' and 'knowledgeable' are used to refer to a specific domain, 'creative' often refers to a person in general, much like use of the word 'intelligent.' Common expectation is that when a person is intelligent, this is a general

ability that will affect performance in almost anything that person pursues. The same expectation exists with regard to creativity.

However, even though common linguistic use of the term creativity may refer to domain specificity, common sense and intuition lead to the opposite conclusion. When considering questions like: Could Mozart have been a terrific inventor if he had directed all his energy to it? And could Einstein have just as easily been a genius painter? One instinctively feels that there is a tension.

This then eventually stirred the debate of whether creativity is domain-specific or domain-general. The basic question that is central to this debate is: if a person is exceptionally creative in one domain, to what extent does this predict increased levels of creativity in other domains? Ivcevic (2007) stated that:

“Domain generality would be supported by high intercorrelations among different creative behaviors and a common set of psychological descriptors for those behaviors, while domain specificity would be supported by relatively low correlations among different behaviors, and a diverging set of psychological descriptors of those behaviors” (p272).

Unfortunately this is not so easy to test, as there is much debate on reliability of the tests used. Different outcomes of different test approaches are exactly the basis for the two opposing viewpoints. Advocates of the specificity standpoint rely mostly on outcomes of studies focusing on comparison of creative products, while advocates of the generality standpoint build their argument on findings from self-reporting studies. The following sections will address these different research methods and outcomes.

3.1.1 Arguments for Domain-Specificity

Proponents of domain-specificity in creativity have largely built their argument on evidence from creative artifacts produced by persons from and within different domains. Respondents who were specifically creative in one domain were asked to also produce artifacts in different domains. If creativity would be domain-general, the expectation would be that on average creativity in all these domains should come out higher than for generally non-creative people (not creative in any domain). Or as Baer put it: “All we need to do is find out if people who are more creative in domain X are also more creative in domains Y and Z [...] as domain-generality predicts?” (p325). If no such intercorrelations among creative behaviors seem to exist, this would be evidence of domain-specificity.

However, measuring levels of creativity is a difficult task as most tests of creativity use an indirect approach. Furthermore, most creativity tests were based on the assumption of domain-generalty. A solution came with the development of the Consensual Assessment Technique (CAT), introduced by Teresa Amabile (1982, 1983, 1996). This testing method asks experts in the concerning field to rate creativity levels of artifacts produced by respondents in comparison to one another. Kaufman et al. (2008): "The CAT is based on the idea that the best measure of the creativity of a work of art, a theory, or any other artifact, is the combined assessment of experts in that field." (pp54-55). Although the CAT of course remains a subjective measure, internal consistency of the ratings proved to be very high, indicating reliability of the measure (Baer, 1993, 2010; Amabile, 1982, 1983, 1996; Baer, Kaufman & Gentile, 2004; Kaufman, Plucker et al. 2008)

By having respondents carry out several tasks in different domains, producing a creative product and then having these artifacts rated for their creativity using the CAT technique, correlations could be determined in creative performance between the different domains. As it turned out, these intercorrelations were extremely low and often not even statistically significant.

An example of such a study, is one performed by Baer in 1993. He asked 50 young students in their early years in high school to perform several creative tasks, such as writing a poem, writing a story and creating an interesting mathematical equation. Using the CAT technique these artifacts were then rated and analyzed for intercorrelations. Even after corrections for variance that could be explained by math and verbal standardized test scores, the intercorrelations were very low with a mean correlation of $-.05$. Only one of the correlations proved statistically significant, meaning that in essence, the (low) correlations found could not be interpreted as meaningfully describing the data.

Critics of this research approach have stated that due to small sample sizes and restricted ranges in terms of age, intelligence, culture etc. these findings cannot be held as representative (Kogan, 1994). Furthermore, the testing method's reliability is questioned because of the fact that it is in essence a single-item test (only one artifact per domain is judged, albeit a 'rich' artifact). Proponents of the method defend themselves by acknowledging that no testing method can ever be perfect, but that even with larger sample sizes and with correction for possible biases by, for instance, attenuation, the conclusions remain the same.

3.1.2 Arguments for Domain-Generality

Arguments for domain-generality rest on the same line of reasoning: creativity can be assumed domain-general when a person who is established to be highly creative in one area, displays levels of creativity across domains that are on average higher than those displayed by persons who are not particularly creative in any area. Although the line of reasoning is the same as those of advocates of domain-specificity, conclusions derived from it are different, which results from different testing methods. Proponents of the domain-generality viewpoint do not derive their conclusions from analyzing creatively produced artifacts, but from studying psychometric and personality data (Baer, 2010). Plucker (1998) states: “The conclusions of researchers using the CAT are almost always that creativity is predominantly task or content specific [... but] researchers utilizing traditional psychometric methods usually conclude that creativity is predominantly content general” (p181).

The type of testing used most often in this context are creativity checklists in which respondents fill out checklists on their own perceived creative performance (Baer, 2010). Such studies performed by Runco (1987), Hocevar (1976) and a very large scale study by Kaufman, Cole and Baer (2009) all showed moderate correlations among self-reported levels of creativity in several domains (Baer, 2010). Interestingly, when a CAT like test was applied to the artifacts produced in Runco’s 1987 self-report study, no correlations were found, contradicting the findings from the self-report study. Although difficult to prove which testing method is right in this regard, it does illustrate that the testing methods come to different conclusions based on the same data.

Self-report studies have been criticized for the risk of respondents misrepresenting themselves, which would cause the data to be invalid. This criticism is used in a much broader context than just creativity research and is especially applicable in situations where there is much at stake for respondents. Dubner & Levitt (2006) for instance found that in a study among doctors asking about the number of times they washed their hands during the day, that the self-reported rate was 73% percent, while the actual hand-washing rate was only 9%.

Another type of study of which the outcomes are used to support the domain-generality claim, are studies related to personality characteristics and creativity. Feist (1998, 1999) found that people who display high levels of creativity in a domain like art or science, “tend to be open to new experiences, less conventional and less conscientious, more self-confident, self-accepting, driven, ambitious, dominant, hostile and impulsive” (p290) than people who were not specifically creative in any domain. He did also

find differences among the domains, being that artists are generally more affective and emotionally unstable, than respondents who were creative in the scientific domain. A note Feist made with his study, is that even though correlations are observed, nothing can be said about the direction of causality. It cannot be said whether the observed personality characteristics are the cause or the result of the higher levels of creativity. It is also difficult to determine whether this in fact is proof to domain-generality. As Baer phrased it “More creative artists and scientists both tend to be open to new experiences, but is this a general trait or a domain specific one?” (p335) Are artists and scientists open to the same kinds of new experiences, or are those experiences domain-specific? Despite the limitations of this approach, the personality measures provide at least a moderate proof for domain-generality.

This shows that with the use of completely different research methods, complete opposite conclusions can be drawn. It is quite impossible to determine which approach is right and therefore several researchers have tried to consolidate the findings of both ends of the spectrum into models that claim that creativity exists of both domain-general and domain-specific components. The next section will elaborate on these.

3.2 The Middle Ground: Models Combining Specificity and Generality

3.2.1 Amabile's Componential Model of Creativity

In between the domain-specificity and domain-generality advocates, theorists stood up and proposed a middle ground. They argue that creativity should be seen as a componential model in which a combination of cognitive, conative and environmental attributes converge to result in creative behavior (Lubart & Guignard, 2006). In 1996 Teresa Amabile developed her 'Componential Model' of creativity. She argues that neither a trait approach nor a general ability approach is complete but that creativity is best conceptualized as "a behavior resulting from particular constellations of personal characteristics, cognitive abilities and social environments. This behavior, which is evidenced in products or responses, can only be completely explained by a model that encompasses all three sets of factors." (p358)

Amabile defines the three components of creativity as follows. The first component consists of domain specific skills, which include technical skills and specific knowledge of the domain, but also a degree of talent. According to Amabile, these skills are the combined result of innate abilities and (in)formal training. The second cluster of skills are more domain general and relevant to creativity in general. Skills in this cluster pertain to the creative process itself, like having an appropriate cognitive style and proper idea generation heuristics. Training, personality and experience are mentioned by Amabile as the most important factors that amount to these creativity-relevant skills. A final component of creativity that Amabile distinguished is task motivation, which is Amabile's personal prime focus in her research. She states that even if a person possesses domain-relevant skills and creativity-relevant skills, creativity is only bound to occur when a person asserts his motivation to produce creatively. Task motivation is dependent on attitude towards the task, which in turn depends on intrinsic motivation and the degree to which external constraints are present. Amabile argues that creativity occurs at the convergence point of the three mentioned components, thus advocating a model in which domain-specificity and domain-generality go hand in hand.

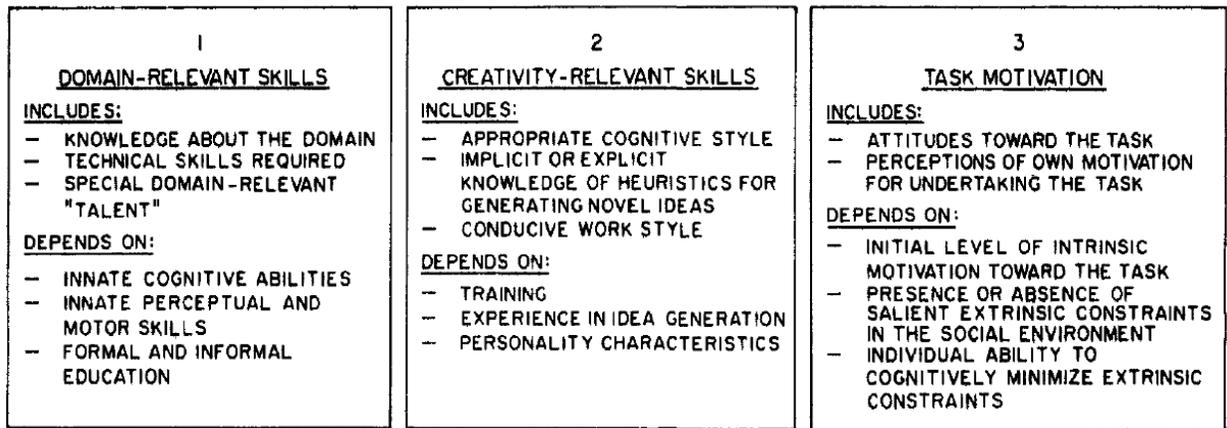


Figure 3: From: Amabile, T. M. (1983). *The social psychology of creativity: A componential conceptualization*

3.2.2 Kaufman & Baer's Amusement Park Theory

A second model that combines the notion of domain-specificity and domain generality is the hierarchical model of creativity developed by Kaufman and Baer (2004, 2005b, Baer & Kaufman 2005), which they named the Amusement Park Theory (APT) in which they draw an analogy between creativity and an amusement park. The APT includes four levels in the hierarchy.

1. Initial Requirements

These are domain general factors that lie at the basis of creative performance and influence this performance at least to some extent in any domain. These factors in themselves are not sufficient to be creative, but they are necessary prerequisites. Examples of such general factors are intelligence and general motivation. In their amusement park theory, Kaufman and Baer draw the comparison with the initial requirements for visiting an amusement park, you for instance have to have the time and means to do so.

2. General Thematic Areas

The second level in the hierarchy is formed by broad thematic areas. Kaufman and Baer argue that on top of the general factors influencing creativity, there are also skills and personality traits that make a person more or less apt in certain thematic areas. Such thematic areas are broadly defined and can include several domains. Examples are Artistic/Visual or Math/Science. In the theme park metaphor, it

can be said that once you have decided to go to a theme park, there are many different kinds to choose from: a zoo, waterpark, rollercoaster park etc.

3. *Domains*

Domains are defined by Kaufman and Baer as more limited areas within the general themes. Poetry, fictional writing and (theater) playwriting are domains in the general thematic area of Artistic/Verbal. They point out three factors that are of particular importance at this level: personality, knowledge and motivation. According to Kaufman and Baer, the task specific motivation comes to play at this level and determined to a large extent in which specific domain a person develops himself. Task specific knowledge is then necessary to correctly carry out the task. Furthermore, they state that certain personality traits are more important to specific domains than to others. In their comparison with theme parks, Kaufman and Baer describe how – once you've made the decision to go, and which theme the park should have – you need to choose which specific park it will be. Within the animal theme, will it be Sea World, or the San Diego Zoo?

4. *Micro-Domains*

The final level in the hierarchy of creativity is the micro-domain. This refers to specific knowledge or skills one develops in relation to a certain domain that are not transferable to other domains, let alone to other thematic areas. If you study the clarinet extensively, this enables you (if the other preconditions are met) to be creative in that micro-domain. However, it does not help you to be creative on the piano, or be creative as a painter, let alone as a mathematician. In the theme park analogy, Kaufman and Baer use the specific rides, animals etc. as example. Once you are in a zoo, you can choose to go see the giraffes, or the chimpansees, etc.

3.2.3 Evaluation

Although the above described theories intuitively sound plausible and would offer a reasonable explanation for the fact that opposite conclusions can be drawn in empirical research on domain-specificity versus generality, no empirical evidence is present to support the Componential model or the APT. This limits these theories to the level of conceptualizations, which have nonetheless become leading in the creativity field. Dedicated empirical research is needed in order to confirm the conceptualization that creativity is both domain-general and domain-specific.

3.3 Developing the Notion of Domain-Specificity

While the debate on domain-specificity or domain-generality has not been settled, the notion that creativity might not be a homogeneous concept has inspired attempts to define which different types of creativity might exist. Some of those attempts continued on the train of thought that different domains require different types of creativity and thus made an effort to distinguish relevant domains. Other studies focused on domain-transcending typologies of creativity. This section will describe several distinctions of domains and will then briefly and generally address domain-transcending typologies, before zooming in on the domain of artistic creativity.

3.3.1 Defining Domains

One of the main issues that proponents of domain-specificity have struggled with to resolve is the definition of the domains. If creativity is domain-specific, then which domains can be distinguished? When it comes to the definition of domains Feist (2004) states that: “Domains of mind have some degree of physical-neuroanatomical status, but are primarily conceptual and heuristic.”(p58) As a result, the domain specifications are highly conceptual and numerous of them exist, without any real consent on which specification is leading. Kaufman (2009) calls this quest for defining domains “perhaps an ancient one” and draws the comparison with the nine muses from Greek mythology and what they represent (D’Aulaire & D’Aulaire, 1992), see figure below. Although our conceptions of creativity have since changed, the recognition of different sources of inspiration needed in different domains is ancient.

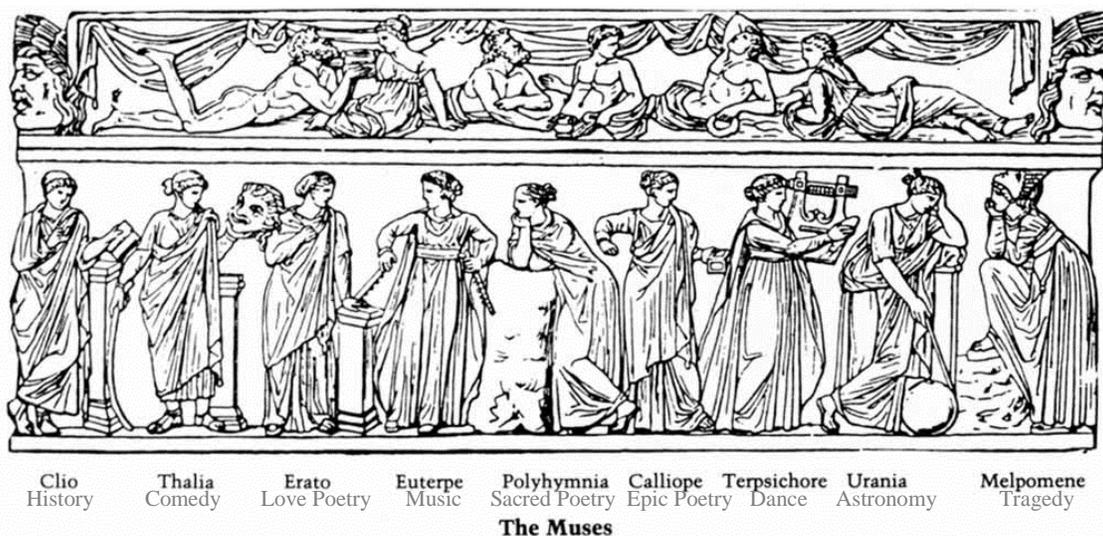


Figure 4: The Nine Muses - From www.imaginalinstitute.com

The definition of a domain is: “A given set of principles, the rules of their application, and the entities to which they apply.” (Gelman & Brenneman, 1994). Feist (2004) adds that domains are often also interrelated and that they evolve over time, as the result of natural evolutionary forces pressuring humans to be inclined to seek for certain sensations and experiences. Feist proposes seven domains of mind, which he associates with domains of creativity. He used the following set of criteria to develop his conception of the seven domains:

- Archeological records for historical reference
- Comparative evidence from other living species
- Developmental psychology to indicate that the capacities are easy to learn for mankind
- Universality: capacities must be universal across cultures
- Precocious and prodigious talent as an indication of existence of a domain
- Knowledge from the field of neuroscience

These criteria led him to define the following domains of mind: psychology, physics, biology, mathematics, musical ability, linguistics and aesthetics. The reasoning for the definition of these domains lies in studying domains and how they evolved over time, by means the above described variables.

Kaufman and Baer (2004) attempted to define domains using a different approach. They asked a large sample of respondents to rate their own creativity across multiple domains and performed a factor analysis on the results. From this analysis they derived three main domains: ‘Empathy / Communication’, referring to creativity in the area of communication and relationships; ‘Hands On’, referring to arts, crafts and physical creativity. The last domain distinguished is creativity in ‘Math / Science.’ The same study was carried out by Rawlings and Locarnini in 2007 and not only did they find the same three domains, they also found that in general professional artists scored higher in the ‘Hands On’ domain and scientists scoring higher in the ‘Math / Science’ domain.

Kaufman and Baer (2006) replicated their own study later on a larger scale, testing more domains and found seven thematic areas as a result. By conducting a factor analysis on the results of 3500 respondents rating their own creativity across 56 domains, they came to the following seven domains: Artistic-verbal, Artistic-Visual, Entrepreneur, Interpersonal, Math/ science, Performance, Problem-solving.

It should be noted that in these mentioned studies, the derived factors are based on the self-perception of respondents and thus are sensitive to the same kind of bias as previously discussed

regarding self-report studies. Furthermore, the domains that were tested by Kaufman and Baer were always predetermined and thus carried the risk of limiting the outcome.

Ivcevic and Mayer (2007) addressed this problem by conducting a self-report study with open ended questions rather than creativity checklists on predefined domains. The open-ended questionnaires were complemented by group-discussions to link creativity domains to specific behaviors. Factor analysis was then applied, which resulted in the abstraction of three broad factors. The first factor was called 'The Creative Lifestyle' which included arts and crafts, but also interpersonal relations. The second factor was called 'Performance Arts' and pertained to music, theater and dance. Ivcevic and Mayer named the third factor 'Intellectual Creativity' which included science, academics and technology.

The table below gives a brief overview of all the different domain specifications and shows the variety and overlap in the different conceptualizations. Remarkable is, that despite the broad selection of domain specifying studies to choose from, in many studies domains are simply assumed. Studies often refer to 'scientific creativity,' 'artistic creativity,' and 'organizational creativity' without giving a definition of the domain they are referring to and without explaining or justifying this delineation. Another notable issue is the fact that in none of the described domain specifications, the domain of organizational creativity is mentioned, even though this 'type' of creativity is one referred to frequently in literature. The specification of the domain of organizational creativity seems to differ from most domains in that the setting in which the creativity is to occur, is leading in its definition, rather than the content of its creativity.

FEIST (2004)	KAUFMAN & BAER (2004)	KAUFMAN & BAER (2006)	IVCEVIC & MAYER (2007)
Psychology	Empathy/ Communication	Interpersonal	'The Creative Lifestyle': Arts, crafts and interpersonal relationships
Aesthetics	Hands on	Artistic-Visual	'Performance Arts' music, theater and dance
Mathematics	Math / Science	Math/ science	'Intellectual Creativity' science, academics and technology
Biology		Artistic-verbal	
Musical Ability		Entrepreneur	
Linguistics		Performance	
Physics		Problem-solving	

Table 2: Different Domain Specifications

3.3.2 Typologies of Creativity Based on Other Dimensions

Apart from distinguishing different types of creativity based on domains, typologies of creativity have also been developed based on other dimensions. Although this stream of research falls outside of the scope of this study, it is worth briefly mentioning several studies pursuing this view of creativity. Interestingly, many of the typologies developed based on these general dimensions could co-exist with a domain division. Often the typologies of creativity based on general dimensions are more a classification of the magnitude of creativity than a classification of its nature.

Sternberg (1999) for instance does so with his 'Propulsion Model' of creativity in which he distinguishes two main categories of creativity, which each holds several specific types. He argues that creativity *is* propulsion: moving a field from one point in a multidimensional space to another. The types of creative contributions he conceptualizes are the following:

Contributions that accept current paradigms and attempt to extend them

- *Replication*: proving that the field is in the right place
- *Redefinition*: changing the viewpoint of the current status of the field
- *Forward incrementation*: moving the field forward in the direction it is already moving in
- *Advance forward incrementation*: moving forward beyond the expected acceleration rate

Contributions that reject current paradigms and attempt to replace them

- *Redirection*: moving the field in a different direction
- *Reconstruction / Redirection*: Bringing the field back to a point where it once was and from thereon changing its direction
- *Reinitiation*: Adding a new viewpoint from whereon the field can move in an entirely new direction

Another model that distinguishes different types of creativity based on general dimensions is Unsworth's Creativity Matrix (2001). She argues that Sternberg's Propulsion Model has two large downsides, caused by the fact that the typology is based on end products of the creative process. This leads to the fact that only finished ideas are being studied and not ideas that may have never made it to an end product. Furthermore, the typology can only be applied in retrospect, which causes the analysis to be sensitive to failure of recollection, possibly causing bias. In order to overcome these downfalls, Unsworth argues that categorization of creativity should be based on the initial engagement in creativity.

Related to this she distinguishes two dimensions that together form a matrix for categorization of creativity. The first dimension is based on the questions of why a person engages in creativity, with external and internal drivers on either side of the spectrum of the dimension. The second dimension is based on the question of whether the problem type is open or closed. This then results in the matrix below, with four quadrants:

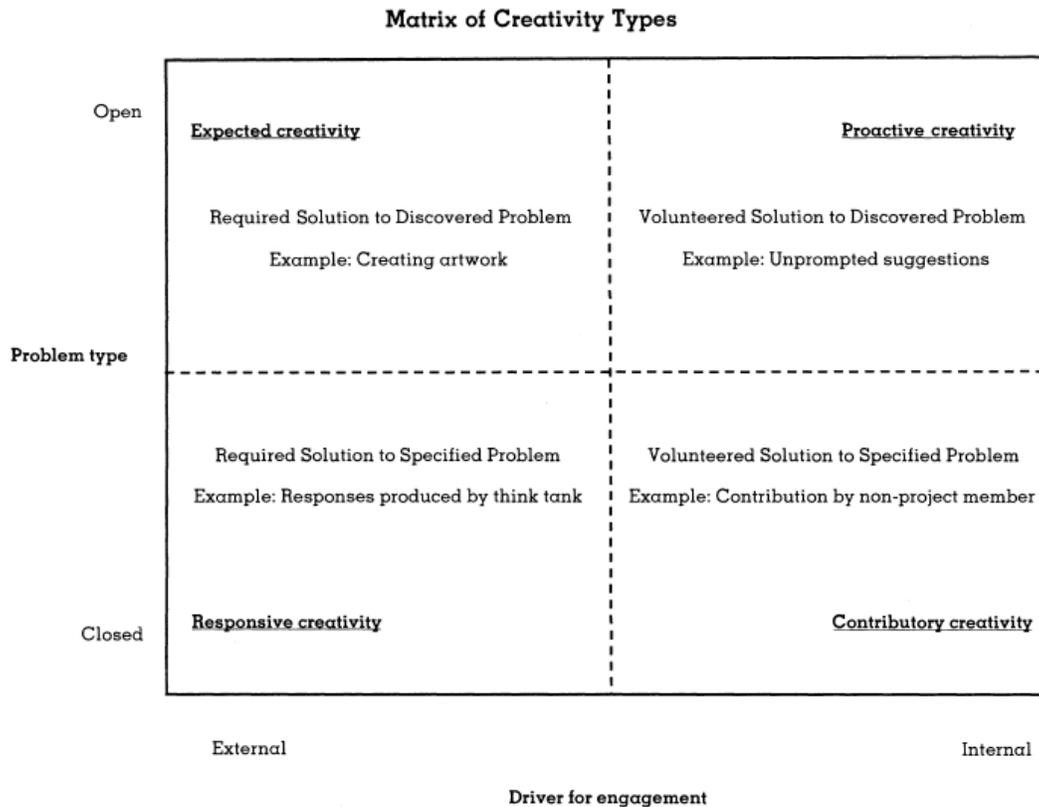


Figure 5: Matrix of Creativity Types - From Unsworth, K. (2001). *Unpacking creativity*. p291

- *Responsive Creativity*

Externally driven and a closed problem type result in a situation where the creative person responds to the situation according to valid requirements. This type of creativity is the most restricted.

- *Expected Creativity*

Externally driven, but an open problem type combined makes for expected creativity. Examples of such would be situations in which a person is expected to create something, but the way in which he fulfills his task and the sources he uses are not specified.

- *Contributory Creativity*

Creative activities that are internally driven and focused on a clearly formulated problem is called contributory creativity, because of its helping nature. This type of creativity occurs when a person voluntarily helps with finding a solution to a problem he is not directly involved in.

- *Proactive Creativity*

This type of creativity is internally driven and focuses on open problems. This is the most open, unrestricted form of creativity and completely depends on a person's own initiative and creative ability.

Unsworth points out that this categorization of creativity leads to the conclusion that creativity research has been rather limited as many empirical testing methods such as the TTCT can only measure responsive creativity. Other types of creativity such as defined in this matrix are difficult to measure, especially proactive creativity.

3.3.3 Application to Current Study

The main research question of this study revolves around the question of whether artistic creativity behaves differently than organizational creativity. As the above described definitions of domains and typologies of creativity have illustrated, a wide variety of different types of creativity would have been available for comparison.

The choice for organizational creativity versus artistic creativity was mainly based on the fact that these two types of creativity are often referred to in literature. Especially organizational creativity is often mentioned, which inherently implied a broad base of knowledge on this particular type of creativity. Artistic creativity is often mentioned, but has less often been the primary subject of study as distinct type of creativity, neither have its characteristics or behavior been described, making this a highly relevant research topic. Furthermore, artistic creativity is a domain that is distinctly present in most domain specifications, albeit often in more specific form. Especially the 'Hands On' arts domain as conceptualized by Kaufman and Baer (2004) matches with the conceptualization of artistic creativity used in this study.

The following section will address some research in which artistic creativity plays a central role.

3.4 Artistic Creativity

After having explored different specifications of domains, this section will now elaborate on the specific domain central to this study: the artistic domain. Several studies in which artistic creativity plays a central role, will be briefly mentioned in order to give a representative impression of research that has already been carried out on the topic. In the domain of artistic creativity, research can again be divided in the four streams of person, press, process and to lesser extent product (study of the product of artistic creativity is essentially in the study of art, which is of course done extensively, although not specifically in relation to the production of the artwork).

A first stream of research on artistic creativity is focusing on the creative person and specifically personality traits of artists. In psychological studies artists have been found to be more likely to possess a certain set of personality characteristics. Abuhamdeh and Csikszentmihalyi (2004) described the outcome of several studies in this regard and mention that artists have for instance been found to be emotional (Barron, 1972), sensitive, independent, impulsive and socially reticent (Csikszentmihalyi & Getzels, 1973; Walker, Koestner & Hum, 1995), introverted (Storr, 1988) and nonconforming (Barton & Cattell, 1972).

Abuhamdeh and Csikszentmihalyi (2004) themselves argue that artistic creativity is not just in the artist's personality, but that it is established in the interactions with his surroundings. This is thus a study in the research stream 'press.' They state:

"Artists have traditionally been perceived as individuals working in relative isolation, free to flow their creative urges. [...] A consideration of the forces at work suggests a less romantic image. One does not become an artist by simply making art. To earn a living and develop a self-concept as a bona fide artist [...] one must be legitimated by the appropriate art institutions" (p37)

They propose that creativity can be observed in the interrelations between individual, domain and field, together forming a systems model of creativity. This is a slightly different take on the 'press' concept, where the 'press' from environmental factors is not a factor contributing to the occurrence of creativity, but has a validating role in creating legitimacy for the occurring creativity.

Another stream of research to be discussed here is studying the process of artistic creativity. Beardsley (1965) aims to conceptualize the process of artistic creation. He defines the creative process as the period between the inception of the creative idea until the moment that the work of art is finished.

Hypothesizing that the artistic creative process might follow a basic formula, Beardsley explored input from artists, psychologists and philosophers. He comes to the conclusion that the input and viewpoints are too fragmented to draw the conclusion that such a formula exists. Instead he proposes that the real creativity does not stem from the process of the artists, but stems from the artwork itself that is being created. He states that artists can “only manipulate the elements of the medium so that they will make the[ir] quality emerge ” (p303)

The final stream of research focuses on the creative product. This stream of research studies different aspects than the actual creative production itself. There is a large research area that studies art and its actual form and content and its meaning within a context. As this is a different research area than the exploration of the nature of creativity and the characteristics of possible different types of creativity, this area will not be addressed.

When evaluating the many different studies that revolve around artistic creativity, it is remarkable to note that nearly none of them give any kind of definition of what is understood as ‘artistic creativity.’ And this while artistic creativity is a relatively widely studied field of creativity (Niu & Sternberg, 2001). The only definition found was by Alland (1977): “Artistic creativity refers specifically to the creativity expressed in any aspect of the arts, including visual art, music, literature, dance, theatre, film, and mixed media.” As this definition corresponds well with the ‘Hands On’ domain defined by Kaufman and Baer (2004), this is the definition that will be used in this study.

3.5 Organizational Creativity

After the 1960's in which Guilford gave his seminal address, creativity research took an upsurge. One of the areas in which the research field developed most, was in organizational creativity. Several factors contributed to both the academic and managerial recognition of the importance of creativity.

First of all, globalization processes caused a shift of many bulk manufacturing processes to the far cheaper Asian economies. This left the Western economies with communication and information based services at their core (Hop, 2009). From the 1960's onwards, scholars started to recognize a pattern in this changing world economy (Peters, 2001; Stehr, 1994). Among others Peter Drucker (1968) and Robert E. Lane (1966) described this as the foundation of the so called 'knowledge economy,' a concept that later developed into the concept of 'creative economy'. Creativity was identified as an invaluable asset for Western economies to foster, since it is the one thing that cannot be outsourced. Markets will always need creative input and by specializing and investing in this, the West could save its own economic position (Pink, 2006).

A second factor that quickly turned creativity into a hot topic is the swiftly changing consumer demands along with the high paced technological advances that characterize the current day economy. The internet has made consumers more knowledgeable and thus more critical than ever before. Technology is moving fast and competition is cutthroat. All of this causes the constant need for organizations to adapt, innovate and re-invent themselves and their products. In this process creativity has become acknowledged more often by organizations as a critical instrument to create long-lasting added value for their stakeholders (George, 2007). It is in fact recognized as the root of innovation (Amabile, 1996).

These two factors resulted in many studies in an organizational setting. Many were interested in finding out how the occurrence of creativity could be stimulated. Interestingly, despite the many studies in this direction, a definition specifically related to organizational creativity is never given. Most studies give an interpretation of the commonly settled on theory as developed by Amabile (1996) such as the one by Plucker et al. (2004):

“Creativity is the interaction among aptitude, process, and environment by which an individual or group produces a perceptible product that is both novel and useful as defined within a social context” (p. 90).

When following this definition, the social context which is referred to, should be considered an organizational setting when it comes to organizational creativity. Other than this conceptualization or the social context, there is nothing in the used definition that refers directly to organizations, not does it provide insight into the distinct nature of organizational creativity. This leads to the conclusion that many studies into organizational creativity assume it to be a homogeneous, domain-general concept, which is now simply asserted in an organizational context.

Nonetheless, this definition of organizational creativity will be tentatively adopted for this study. First of all, because of the fact that at this point in time no other evidence is available that could help with the formulation of a more specific definition. And second of all, because this study aims to learn about the behavior of different types of creativity, rather than to capture differences in its nature.

4 Creativity and Contextual Factors

This study focuses on the specific aspect of the influence of contextual factors on creativity. Therefore, it is appropriate to now first discuss the how the 'P' of press in creativity research is viewed. After that, this chapter will zoom in on contextual factors in an organizational setting. The main research question seeks to compare the way organizational and artistic creativity respond to contextual factors. As was stated before: creativity research has developed richly in organizational contexts. Therefore, previous research on the organizational 'creative climate' will form the basis for the organizational half of the comparison. The literature on creative climate in organizations, together with literature on creative 'press' in general will be used for sensitizing purposes in the exploration of contextual factors in relation to artistic creativity and will lead to the drafting of the interview protocol.

4.1 Press: The fourth P

Early studies of creativity generally had an individualistic approach, as creativity was thought to be a form of self-expression and self-actualization (Cropley, 2006; Maslow, 1973; May, 1976; Rogers, 1961). To a certain extent it was even suggested that creative individuals had to be antisocial and had to rebel against socialization to be able to be creative (Barron, 1969). Cropley (2006) points out that this has led to the fact that creativity theory sometimes involved "the glorification of individuals" (Boden, 1994, p4). Amabile (1996a) identified this focus on the individual as well and traces this back to Guilford's 1950 address in which he stated: "the psychologist's problem is that of creative personality" (p444). For a long time creativity research focused either on specific personality traits of the creative person, or on individual cognitive systems in the creative process (Amabile, 1996a). The creative product was also studied but was less prominent in psychological studies of creativity (Cropley, 2006). In 1961 Rhodes proposed to add 'Press' as a fourth P to the previously established Person, Process and Product. Press refers to environmental influences on creativity and aims to create a social approach to creativity. Cropley (2006) describes how creativity has several social aspects:

1. Creativity should be considered a social force, with responsibility to its social environment, instead of merely for its purpose in self-actualization.
2. What is considered 'creative' is socially determined, as is also embedded in the definition of creativity

3. Society plays a role in determining the extent of creativity 'allowed' as too much deviation of the 'standard' is considered undesirable
4. Creativity itself is influenced by its environment, for instance in relation to motivation.

This last aspect received considerable attention in the years after Rhodes' introduction of the fourth P, Press. In her book 'Creativity in Context' (1996a) Teresa Amabile describes studies into the aspects that are considered to have an influence on creativity, among others: effects of evaluation, reward, task constraint, social facilitation, family influences, societal, political and cultural influences and the physical environment.

With regard to the first factor: the influence of evaluation, Amabile (1996a) describes how studies have found that creativity is negatively impacted when the creative person knows his or her work will be evaluated. Even the anticipation of possible evaluation can have a negative effect. This is mainly applicable to creative tasks with a heuristic nature and less to tasks with an algorithmic nature. Furthermore, even actual positive evaluation can affect creativity as it may lead to expectation of future evaluation.

The second factor Amabile (1996a) describes is reward. In part, this aspect is related to receiving positive evaluation, which leads to adapted behavior in anticipation of reward. Apart from this, Amabile also links reward to creative persons' motivation. Receiving reward is an external motivator which has been found to be detrimental to intrinsic motivation, while intrinsically motivated people were found to be more creative. This mechanism can also apply to a setting in which a creative task is performed under a contract. The contract holds certain rewarding components if the creative task is fulfilled, which may lead to extrinsic rather than intrinsic motivation. Amabile does point out that under certain circumstances, reward can have a positive influence, i.e. when the reward signifies competence or enables performance of new creative activities.

This next factor Amabile (1996a) puts forward is the factor of task constraint. This factor pertains to the degree of freedom one has on carrying out a certain potentially creative task. The larger the freedom one has, the larger the intrinsic motivation generally is and vice versa. This thus also relates to settings in which creative tasks are performed under contract, where often requirements regarding the creative product are part of the contract, albeit restricting freedom. This can again have a negative impact on creativity.

Continuing, the factor of social influencing is elaborated on by Amabile. This factor has several aspects. First of all, the aspect of being creative in the presence of others. This is found to have an impeding effect on creativity, which is likely to be connected to the perception of possible evaluation. On the other hand, social influences can have a positive effect in the form of role-models who can form an inspiration for aspiring creative persons. Related to the social influences is also the factor of family influences. Encouragement of creativity in combination with low levels of restrictiveness and authoritarianism during a person's upbringing, can have a positive influence on creative propensity according to Amabile (1996a).

A cluster of factors discussed by Amabile is that of societal, political and cultural factors. Amabile describes how historiometric studies by Simonton (1975) have shown that certain disturbances on a societal level, such as violence, wars and political instability can have a negative influence on creativity. On the other hand, political fragmentation and imperial instability can have a positive effect. Remarkably cultural prosecution was not found to have an impact on creativity.

The final factor influencing creativity as described by Amabile which will be discussed here is the physical work environment. Amabile points out that little academic research exists on the influence of the physical environment, but that in creative products frequent reference is made to the environment, which leads to suspect that it does play a role. Some evidence was found that visual scanning of the environment during the creative process can contribute to higher levels of creativity. A cue-rich environment might thus be a stimulant for creativity.

As this account of Amabile's review shows, the fourth P has been studied quite extensively. However, the distinction between different types of creativity is hardly ever made. There is one exception to this. Organizational creativity has been studied in relation to its environment as it is perceived as valuable for organizations to be aware of how they can create a climate that is conducive to creativity. The term 'creative climate' is often used to refer to environmental circumstance in organizations that are known to have a positive effect on creativity. The next section will elaborate on research done on this topic.

4.2 Creative Climate in Organizations

If organizations wish to pursue creativity within their organization, the fact that creativity can be influenced through contextual factors, is a highly relevant given. Knowledge on how to create favorable circumstances for creativity to occur gives organizations a tangible tool. To this end, much research has been done on the organizational creative climate. In this research two main perspectives can be distinguished: either the creative climate of an organization is seen as an objective characteristic of an organization, or it is seen as the perception of each individual and thus different for each employee (Mathisen & Einarsen, 2004).

Teresa Amabile follows this last perspective in her extensive studies of creativity in work environments. Whereas her earlier studies on environmental influences on creativity were mainly based on experiments in laboratory settings, Amabile chose a different approach in studying organizational settings. 129 research & development scientists from different companies were interviewed and asked to describe one instance which was characterized by ultimate creative success and one instance that exemplified no creativity (Amabile & Gryskiewicz, 1987). Analysis of the data resulted in the distinction of nine environmental factors that positively impact creativity and nine that negatively impact it. These factors are displayed in the table below and are based on Amabile (1996a) pp231-232:

CREATIVITY STIMULANTS	CREATIVITY OBSTACLES
- Freedom Freedom to decide what to do and how to do it, which results in a feeling of ownership and control over one's work and ideas	- Constraint Opposite of freedom
- Good Project Management A project manager who oversees and protects the project against outside distractions, who sets clear goals, is a role model and communicates well. Also important is a match between a person's abilities and the task given.	- Poor Project Management Opposite of good project management
- Sufficient Resources Having access to needed resources, such as materials, equipment, information, funds etc.	- Insufficient Resources Opposite of sufficient resources
- Various Organizational Characteristics An appropriate organizational culture which is open to renewal; where new ideas are	- Various Organizational Characteristics Lack of acknowledgement of innovation, an atmosphere characterized by boundaries and

welcomed, not criticized and where a mechanism is in place for the processing and follow-up of initiatives.	lack of cooperation, counter-productive reward-systems.
- Recognition A climate in which new ideas are acknowledged and appreciated.	- Organizational Disinterest Perceived disinterest towards a project and its accomplishment. Lack of support and encouragement
- Sufficient Time Time to think about how a task is being approached, rather than mechanically following the imposed pre-determined approach	- Time Pressure Opposite of sufficient time
- Challenge The feeling that a task at hand is challenging and at the same time relevant to the organization, which can lead to the internalization of the challenge by an individual)	
- Pressure An internally conceived sense of urgency which stems from for instance competition with other organizations or from the urge to accomplish something remarkable	
- Encouragement An open and safe atmosphere in which ideas are received enthusiastically and not directly (negatively) evaluated, specifically by management.	
	- Overemphasis Status Quo No willingness to change or to take risks, a general negative attitude towards changing the way things are done
	- Competition A competitive atmosphere within the organization and among employees, resulting in a self-defensive attitude
	- Evaluation Lack of an honest equitable system for evaluation; expectations set too high and a focus on criticism.

Table 3: Overview of Amabile's Creativity Stimulants & Obstacles (1996)

Following the formulation of these factors, Amabile developed a tool to measure organizational creative climate: 'KEYS Scales for Assessing Environmental Stimulants to Creativity' (1996b). The KEYS assessment tools consists of a questionnaire based on 10 scales: 6 measuring creativity stimulants, 2 measuring obstacles and another 2 measuring the dependent variables creativity and productivity. The KEYS scales measure the concepts found by Amabile to influence creativity in organizations. In figure 6 below the 8 scales measuring factors influencing creativity are displayed.

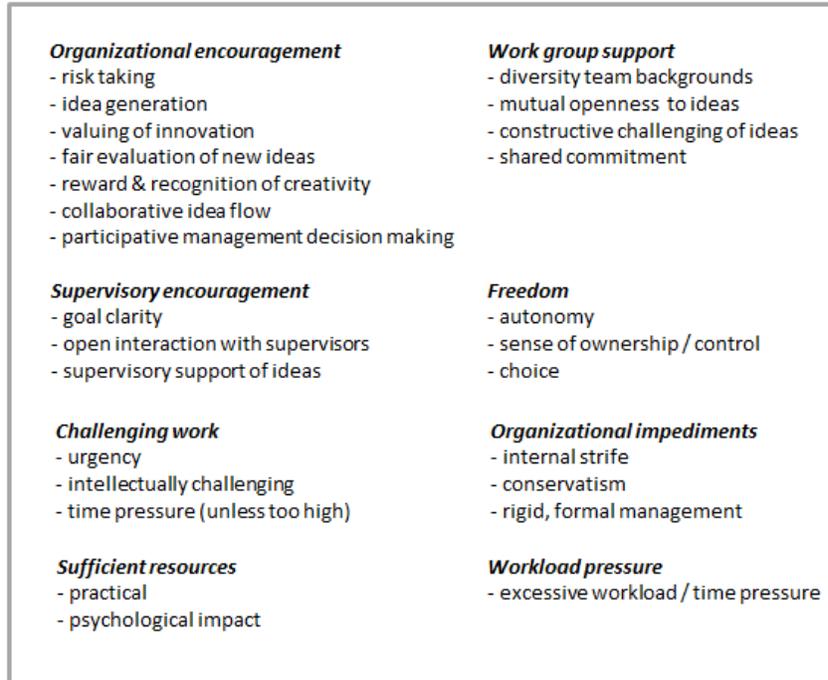


Figure 6: Amabile's Contextual Factors for Creative Climate in Organizations (Derived from Amabile, 1996)

Another such tool to assess the creative climate in organizations is Ekvall's (1996) Creative Climate Questionnaire (CQC). Ekvall performed extensive literature study and formulated ten factors that display great similarity to Amabile's. One big difference is the fact that Ekvall does consider the creative climate to be a characteristic of the organization which should be objectively measurable (Mathisen & Einarsen, 2004). The ten factors are the following: challenge, freedom, idea support, trust/openness, dynamism/liveliness, playfulness/humor, debates, risk-taking, idea time and conflicts (a full description of the ten factors can be found in Appendix 3). For each of these factors goes that the higher the score, the more favorable the environment is for creativity, with the exception of the last factor – conflicts - which is described by Ekvall as negatively impacting the creative environment and thus creativity. The factors of dynamism/ liveliness and playfulness/humor make for a clear distinction with Amabile's factors.

Both of these instruments have been widely empirically tested, practically applied and theoretically studied and can thus be assumed to give a good indication of relevant factors. For the sake of this study, the instruments will be assumed as complimentary to each other and factors from both will be considered in answering the research question.

It must be noted that many of the environmental factors established, are closely related to processes as well. For instance, having appropriate evaluation processes or reward systems in organizations is incorporated in processes. However, these processes cannot be considered equal to the Process P in creativity research as they pertain to supportive and facilitative processes rather than the actual core-creative process itself.

4.3 Sensitizing Effect Current Study

The discussed environmental factors for both creativity in general and organizational creativity, form the starting point for the current study. Having reviewed this literature, a general sense of the research topic has been developed which can be used as the basis for the interview protocol. Based on Amabile's general and organizational factors as well as Ekvall's factors, several thematic areas have been distinguished for the interviews. Note that as Amabile's stimulants and obstacles display some overlap, therefore, the KEYS scales are used as guiding factors. The figure below shows how the factors were deduced.

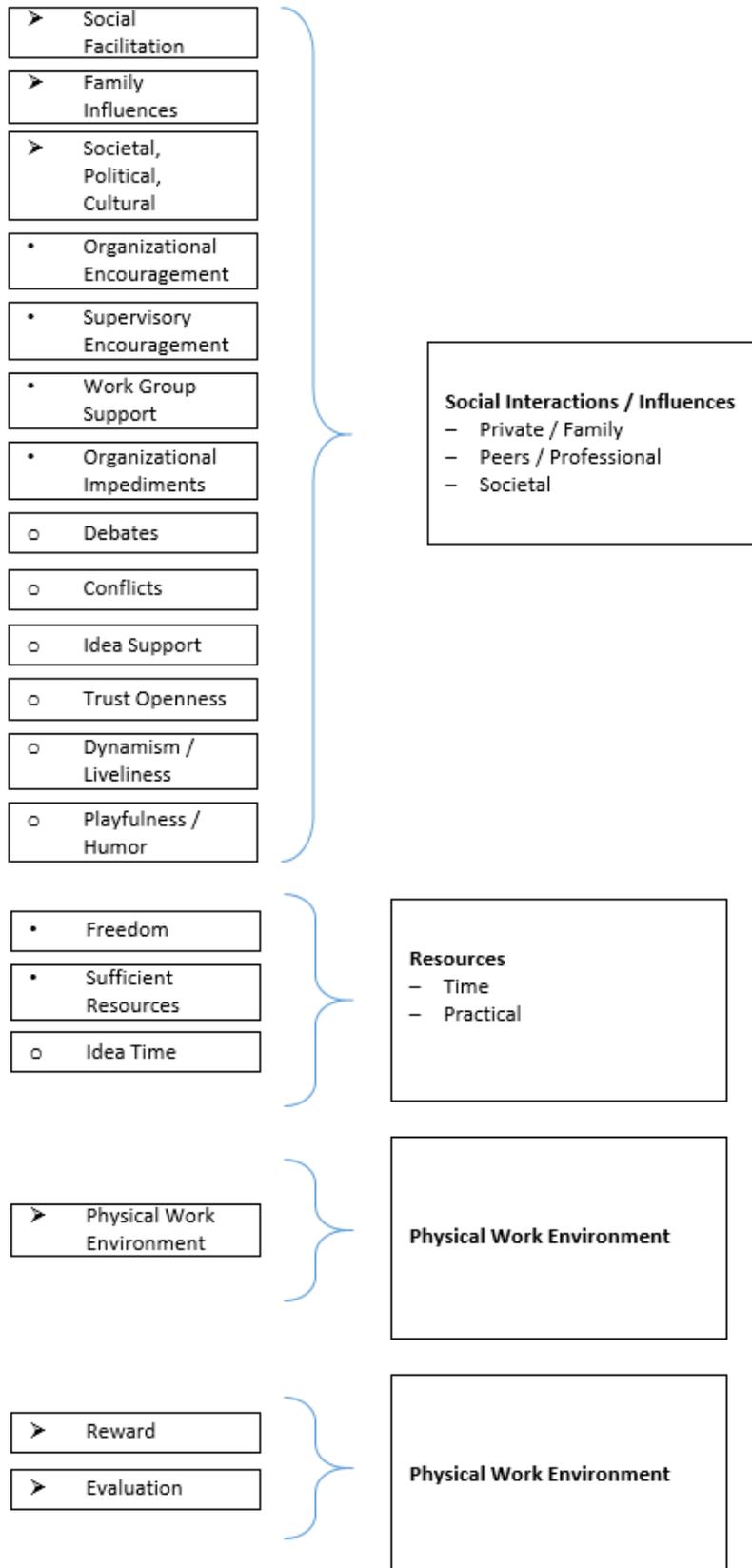


Figure 7: Formulation Thematic Areas Interview Protocol

5 Methodology

The main research question of this thesis is twofold, on the one hand it aims to map the environmental factors that influence artistic creativity. This is a research area in which little work has been done thus far and therefore this study fulfills an exploratory and descriptive role and aims to build theory. On the other hand, the research question aims to make a contribution to the ongoing debate of whether creativity should be considered homogeneous or heterogeneous. It intends to do so by focusing on how the possibly different types of creativity behave in relation to environmental influences, rather than by trying to capture its essence. In doing so, this aspect of the research question ambitions to extend the existing theory on creativity types. This twofold research question implies two stages in the research, the first stage is an exploratory qualitative study, while the second stage in essence resembles a comparative case study in which the cases of organizational creativity and artistic creativity are being compared. Given the fact that little research has been done on artistic creativity, qualitative research is deemed appropriate in this context (Benbasat et al, 1987; Straus and Corbin, 1990).

Before describing the research design, it is essential to explicate the epistemological standpoint which forms the basis for the research. Interpretivism is being offset against positivism to set the stage for addressing important research principles and criterions. Core principles for evaluation and conduct will be discussed. In discussing matter such as validity and reliability the further distinction between the positivist and interpretivist approach will be made.

5.1 Positivism versus Interpretivism

Throughout history several important different research paradigms have emerged, that each found their basis in different ontological and epistemological views. Ontology concerns beliefs about the nature of 'being' or reality, while epistemology refers to beliefs about the nature of knowing and thus the nature of science. In the Middle Ages science had been based on Ancient Greek and Latin sources or on the Bible. But resistance against this paradigm developed during the Enlightenment. Scholars started to base their conclusions about reality on observations and experiments: this formed the foundation for the Positivist paradigm (Willis, 2007).

Although Positivism did not truly blossom until the Enlightenment, fundamentals of its reasoning can be tracked back to Aristotle, who argued that nature could only be understood through careful observation and study. Implicit to this statement is the assumption that the external world holds an objective truth

which can only be known by conducting empirical studies. This view thus corresponds with a materialist ontology and an empirical epistemology (Willis, 2007). On the other end of the spectrum stood Plato, who advocated the viewpoint that not observation was the key to knowledge, but rational thinking. According to Plato, truth was merely an idealized concept that could exist only in the mind. The external world could never display theoretically perfect examples and thus empirical study would only result in the observation of flawed incidents. This viewpoint corresponds with an idealist ontology and a rational epistemology.

The Positivist paradigm gained many adherents and it was at the basis of many important discoveries and breakthroughs in the natural sciences. With the later emergence of the social sciences, positivism was still carried forth as the leading paradigm, which remains the case to date. In positivist research there is “evidence of formal propositions, quantifiable measures of variables, hypothesis testing, and the drawing of inferences about a phenomenon from a representative sample to a stated population” (Klein & Myers, 1999). Positivist research can also be qualitative, such as through case studies. However, even in qualitative research the principle of hypothesis testing through often quantifiable observations remains central. Yin (1994) elaborately describes positivist case study techniques in which issues such as reliability play an important role.

Despite the fact that the positivist approach is very dominant in social sciences, arguments against it have emerged as well. The assumption that a researcher can objectively observe the truth of the external world has become the main point of discussion as several scholars have proposed that no man can ever be truly objective. Every man is influenced and shaped by his individual or cultural cognitive systems and therefore can only lead to subjective observations and personal interpretations. Dilthey et al (1989) proposed to acknowledge this fact and introduced a subjective approach in the social sciences. He states that empirical facts can never exist separate from our mentally pre-conceived notions and that phenomena should be studied in their context in order to be understood (Willis, 2007).

This new standpoint resulted in the Interpretivist paradigm which slowly started to gain ground in the social sciences. Although most studies in the 20th century still remained Positivist (Willis, 2007), Interpretivist research is clearly experiencing a rising (Heshusius & Balland, 1996). In this study it was chosen to take the Interpretivist stance, which calls for further elaboration on this epistemology.

5.2 Interpretive Qualitative Research

“Interpretive research does not predefine dependent and independent variables, but focuses on the complexity of human sense-making as the situation emerges.”

(Kaplan and Maxwell, 1994 in Klein & Myers, 1999, p69)

The Interpretivist paradigm revolves around the main viewpoint that reality as we know it is the result of perception by the human mind and is thus socially constructed. Interpretivists do not deny the existence of one objective truth in the external world, but they do argue that man does not have access to it. Each human being looks at the external world through his personal lens, which results in a personal truth (Willis, 2007). Interpretive research therefore aims to understand phenomena in relation to their context and with recognition of the role that the researcher plays in interpreting the data.

This aim leads interpretive research to often have a different focus than is the case in positivist research. Whereas Positivist studies aim to generate general theories based on the collected data, interpretivist studies specifically aim to understand a phenomenon in its specific context. The context of a phenomenon is crucial as the Interpretivist epistemology strongly believes in the situatedness of knowledge. However this does not mean that interpretive studies only pursue ideography, generalizability is very well possible from interpretive research as well, it just acknowledges a different basis for generalization. In positivist research generalizability is sought through statistical sampling and statistical generalization, opposed to theoretical sampling and theoretical generalization in interpretive research (Andrade, 2009). By linking findings from data back to existing theories through a process of theoretical abstraction (Klein & Myers, 1999) interpretive studies can support general applicability of findings in a specific context.

The fundamental viewpoints of Interpretivism that knowledge comes to existence in interaction with its context and that each researcher perceives data through his own lens, also leads to the belief that there is no one best path to gain knowledge. As a result, very few guidelines exist as to how to best carry out interpretive research (Klein & Myers, 1999). This is in quite stark contrast to positivist research, which believes that no knowledge can be acquired without adhering to certain standards of research (Willis, 2007). This is an important reason why interpretive research has not quite been accepted as a mainstream research approach. Klein and Myers (1999) developed a set of principles for interpretive research, based on the philosophical ideas at the base of the interpretivist paradigm.

5.2.1 Klein & Myers' Seven Principles for Interpretive Field Studies

In their pursuit of making Interpretive research more transparent, Klein & Myers (1999) formulated a set of seven key principles that interpretive researchers can use in their field studies. In line with the Interpretivist view that there is no single best way to gain knowledge, Klein and Myers do state that researchers can apply the principles according to their own insight.

They developed the principles based on studies of the philosophical ideas that from the foundation of the Interpretivist paradigm by which they aimed to firmly ground the methodological principles for conducting and evaluating interpretive research. Klein and Myers point out that within interpretive research several sub streams exist and declare to follow the hermeneutics-based stream for their principles as this provided the most solid philosophical base and therefore lent itself well to the purposes of their research. The seven principles that followed from their study will be briefly described here. For a full description of the principle, see Appendix 1.

- **The Fundamental Principle of the Hermeneutic Circle**

This principle is the first and most fundamental one that Klein and Myers establish and applies to the other six principles as well. It refers to the interdependence of individual parts and the whole they are part of. The iterative process of interchangeably focusing on the parts and on the whole contributes to the understanding of how knowledge is shaped by its context.

- **The Principle of Contextualization**

This principle refers to the Interpretivist belief in the situatedness of knowledge and the constantly changing variables which lead to different interpretations. This has consequences for field research as the researcher should acknowledge the influence of time and culture on both the moment of observation and the moment that the phenomenon under study came into being.

- **The Principle of Interaction Between the Researchers and the Subjects**

The principle of interaction acknowledges that both the researcher and the subjects of the study are interpreters and analysts. Interpretivists believe it is impossible to eliminate these influences and therefore do not label them 'bias' as Positivists do. However, the influence of interaction should be reflected upon by the researcher. Furthermore, the researcher's own sense-making mechanisms shape his preconceptions of the research subject and the participants, which influences the research and its outcomes to a large extent. This should be addressed by engaging in self-reflection, the questioning of preconceptions and assumptions and the conscious reflection on emotional and intellectual responses to observations.

- **The Principle of Abstraction and Generalization**

This principle refers to the basis on which interpretive research can generalize its context-bound findings to more generally applicable theories. Through the hermeneutic principle of linking back individual observations to the larger theoretical whole, generally applicable knowledge can be generated. Through this process the validity of interpretive research findings lies in the solid, plausible, and logical reasoning in the description of results (Walsham, 1993). Four types of generalizations are distinguished: development of concepts, generation of theory, drawing of specific implications, and contribution of rich insight.

- **The Principle of Dialogical Reasoning**

This principle pertains to the way the researcher should deal with theories as sensitizing instruments to shape their preconceptions. Interpretive research acknowledges that preconceptions are the starting point of any research, however the researcher should keep an open mind and an aware and critical attitude towards his prejudices and theories that might have shaped them.

- **The Principle of Multiple Interpretations**

This principle points out that not only the prejudices and preconceptions of the researcher himself should be reflected upon, but also those of the respondents. Respondents might have different viewpoints based on differing cultures, power, values, etc. In order to properly address these issues, probing during the interview is necessary.

- **The Principle of Suspicion**

This principle addresses the possibility of false consciousness of respondents which may occur in respondents due to the influence of power structures, conflicting interests etc.

The relevance of the last two principles is disputed. With regards to the former: multiple interpretations do not necessarily exist en with regard to the latter: this principle is not based on the hermeneutic strand of interpretive research, but on critical theory which is not endorsed by all Interpretivists.

This study aspires to use the described principles in a way as sensitizing theory in itself to create an awareness of the different important aspects that should be taken into account. The conclusions chapter will therefore contain a 'reflections' section in which the role of the principles in the context of this study, will be addressed.

5.3 Validity and Reliability in Interpretive Research

In doing qualitative research and as in this study adopting a case study design, it can be expected that the research outcomes will be challenged for their validity and reliability. Case studies have often been criticized for several alleged weaknesses (Yin, 2003; Andrade, 2009), lack of generalizability, difficulties with subjective interpretations and lack of detailed data analysis protocols. These points of criticism correspond to the hallmark criteria for research: external and internal validity, construct validity and reliability. In this section each one of these scientific hallmarks will be discussed in relation to this study. The interpretive approach leads to a different handling of the hallmarks than would be the case with a positivist approach.

5.3.1 External Validity

The first hall mark to be discussed is that of external validity. A lack of statistical generalizability and representativeness are often named a weakness of case study research (Macome, 2002). Although the Positivist tradition has formulated several tactics that can help to overcome this problem, these do not apply to interpretive research in the same way. Interpretive studies seek to establish theoretical generalizability rather than statistical generalizability. This means that it does not concern itself with the representativeness of the subjects at study and that it does not seek replication of the study in a series to do successive hypothesis testing (Andrade, 2009). Instead, it tries to logically link back the empirical data to existing broad theories to place the data in its context. Note that in this process, interpretive research can work together with positivist research as findings from positivist studies can be used for abstraction purposes in interpretive studies.

Walsham (1993) describes three levels at which theories can be used in interpretive research. First of all theory can be used for sensitizing to aid the design of the research and the preparation for data collection. Secondly, theory can be used during the iterative process of data collection and analysis. Finally, when drawing conclusions from the data, theory can be used for abstraction. All three of these uses have been applied in this study in order to ground the research in theory as firmly as possible and in order to maximize the cogency of the conclusions.

5.3.2 Internal Validity

The second hallmark to address is internal validity, which pertains to the degree that inferences properly demonstrate causal relations (Brewer, 2000). In order to ensure correct inferences the thorough analysis

of data is emphasized by both positivist and interpretivist researchers, for instance through use of coding. However, the Positivist paradigm seeks for hard empirical evidence only, while the Interpretivist paradigm allows for interpretation of the researcher. This results in looser requirements regarding coding approaches as coding itself is considered a subjective process (Walsham, 2006). Although traditional coding approaches such as selective coding and axial coding can be applied in Interpretive research, the use of more open forms such as open coding and a loose associative approach are common as well. Walsham (2006) argues to this end that “the researcher’s best tool for analysis is his or her own mind, supplemented by the minds of others when work and ideas are exposed to them” (p325) and that the use of coding is subordinate to this. This viewpoint corresponds with that of the researcher and therefore in this study a combination of open coding and a loose associative approach was used.

An important aspect of the analysis and interpretation of the data is that the researcher should always keep an open mind and try to look for other explanations of patterns in the data than the most obvious ones (Andrade, 2009). This principle applies to both positivist and interpretive research. Klein & Myers’ (1999) principles give proper direction to ensure this as well, especially the principles of dialogical reasoning and multiple interpretations.

After the data analysis stage, the theoretical abstraction also forms an important contributor to the interpretive conception of internal validity. It is of great importance that abstraction to the theory is done in a sophisticated and concise manner as this forms the main basis for the causal inferences. Walsham (1993) states that the validity of the interpretive case study approach is based on “the plausibility and cogency of the logical reasoning applied in describing and presenting the results from the cases and in drawing conclusions from them” (p15). To this end, this study has invested great effort into the clear description of lines of reasoning and solid theoretical grounding.

5.3.3 Construct Validity

Construct validity deals with the question of whether the issue at hand is being approached through the right “operational set of measures” (Yin, 2003, p35) which can sometimes be problematic. In positivist research strong emphasis is placed on establishing triangulation to ensure construct validity. However, in interpretive reasoning, this is looked upon differently. Willis (2007) dismisses the need for triangulation as he states that based on the interpretive viewpoint that reality is socially constructed, responses by different interviewees are in fact expected to differ. It is therefore not desirable to only present one viewpoint, it is much more valuable to address several of them and analyze their differing contexts.

Therefore, instead of pursuing to find multiple sources that necessarily say the same, this study aims to seek as broad an array as possible of input and viewpoint from different respondents. This should assist in developing an understanding of what the different relevant measures are. It is also in line with the exploratory nature of the first part of the study, in which factors influencing artistic creativity are mapped.

5.3.4 Reliability

The final hallmark to address is that of reliability. In the Positivist paradigm this criterion is related to the degree to which a study is replicable: a study is considered reliable when a different researcher can arrive at the same conclusions upon review of the data, when following the same procedure (Yin, 2009). In Interpretive research this is handled differently. With this qualitative type of research inherently yielding rich and complex results, it is considered obvious that different conclusions can be drawn from them by different researchers (Cornford & Smithson, 1996). All the more so, because each researcher has his personal cognitive and sense making mechanisms to interpret the data his own way. In interpretive research the subjective interpretation of the data is deemed inevitable and as long as properly addressed and reflected upon, this is not considered a problem. In fact, if a different researcher would come to different conclusions based on the same data, this would be considered a valuable addition, rather than an unacceptable falsification of previous findings.

A point of criticism often made in relation to case study research, is the lack of a detailed and clear protocol for conduct and analysis. This aspect is also related to the pursuit of replicability to ensure reliability. Even though replicability is not a concern of interpretive studies, the relevance of developing a more transparent set of principles for conduct and evaluation was acknowledged by Myers & Klein (1999). They developed the set of principles that was described in the previous section in order to improve Interpretive research's reputation and acceptance. As this study aspires transparency of conduct as well as exemplary pursuance of quality standards, Myers and Klein's set of principles will be held as a guiding code of conduct. Although this set cannot be considered a real step-by-step guide for data analysis, it can at least elucidate the process of interpretive research (Hattinga Verschure, 2013).

5.4 Research Strategy & Design

In the decision which research strategy to use, the need to explore and map factors influencing artistic creativity was the driving factor. Because of the fact that little research has been done on artistic creativity, qualitative research is deemed appropriate in this context (Benbasat et al, 1987; Straus and Corbin, 1990). Furthermore, only through qualitative study can the full breadth of factors of influence be explored as it allows for the gathering of very rich data. Following from this, the study will be exploratory and descriptive in nature: it will aim to seek new insights and from that give an accurate account of the phenomenon. This study will thus be inductive: the aim is to build theory out of gathered observations and through theoretical abstraction

When considering which research design to use within the qualitative strategy, it must be noted that the main research question is twofold and therefore requires the combination of two research approaches.

The first step of the research entails the exploration of any and all contextual factors that might have an influence on organizational and artistic creativity to answer the question '*How do artistic creativity and organizational creativity respond to environmental factors?*' For organizational creativity this will be done through literature study, but for artistic creativity this will have to be done through empirical study. In depth interviews with artists will be performed in order to collect data on the topic at hand.

The second aspect of the research question '*to what extent does this provide basis for a meaningful distinction between them [the two types of creativity]*', calls for a comparison between the factors that influence organizational creativity and artistic creativity. This is thus essentially a cross-sectional comparative case study. Factors described in literature regarding organizational creativity are compared to factors found in the empirical study regarding artistic creativity. It is unlikely that the factors found in the literature study and empirical study will match one-on-one and thus a factual and strict comparison will be difficult. That is an important reason why this research subject lends itself well to interpretive research.

An interesting aspect of the second part of the research question is the fact that it aims to contribute to the debate of whether creativity is one or multiple things in an unusual manner. While other studies in the field have attempted to focus on a specific aspect of what creativity actually *is* (or is thought to be), this study focuses on how creativity *behaves*. When making the analogy with the fable of the blind men

and the elephant: this study does not attempt to touch yet another part of the elephant and impose the truth of its entire being on that one particular part. It attempts to study the way the elephant behaves and thus looks at its footprint in the environment. Gaining knowledge on what the types of creativity respond to is considered more useful than only knowing its nature. At the end of the study, the goal is to be able to describe the differences and similarities in the way the types of creativity respond to contextual factors. Based on the possible differences in the 'footprints' an inference can then be made on whether 'the animal' itself must actually be different. Although the study thus aims to be able to contribute to the much-debated question: do different types of creativity exist? It does not claim to give an answer to the issue of what the *essence* of the different types of creativity is. In using this new angle, this study hopes to deliver insight into new possibilities for research approaches.

5.5 Data Collection

Data collection occurred in two phases. The first phase consisted of an elaborate literature study, of which the results were presented in chapters one through four. Data collection for this literature study occurred mainly with help of the internet. Academic articles were collected using Google Scholar and the Erasmus University Library databases. Several essential handbooks on creativity were purchased and books were borrowed from the university library.

The empirical research consisted of nine in-depth interviews with artists, in a face-to-face setting. The artists were approached via several channels: through the researcher's personal and secondary network in the art world and via the internet, where websites of arts academies and other art institutions functioned as portals to redirect to artists' individual websites. Based on information from the personal website an initial screening took place. Potential respondents were selected based on the following set of criteria. The artists had to be:

- Involved in an artistic discipline rather than an applied discipline
- Producing art, rather than reproducing
- Producing art on a professional level
- Preferably experienced in both autonomous and commissioned work
- Preferably coming from a variety of disciplines

The pre-screening gave most opportunity for selection while at a later stage, when potential respondents had been approached via e-mail or telephone, the final selection occurred mainly based on

the willingness to cooperate. This has resulted in a less diverse set of respondents than was initially preferred, however the final list of respondents included visual artists of different kinds, a singer/songwriter, a poet and a choreographer; ages ranging between 27 and 67. The table below gives an overview of all respondents.

Interviews lasted on average one and a half hours and were recorded with permission, for the purpose of later reference. All interviews were processed into elaborate minutes and were later organized in tables according to consistent categories. Methods for further data analysis will be addressed in the next section. All interviewees were promised anonymity. Although the sensitivity of their account was often limited, the decision for anonymity was made on a precautionary basis as the researcher wanted to prevent any kind of inhibition in the respondents as the result of fear of later association to their person.

	Discipline	Place	Date	Duration
Artist A	Singer / Songwriting	Raamsdonk	20-05-2013	56 min.
Artist B	Drawing	Tilburg	21-05-2012	64 min.
Artist C	Drawing	Tilburg	21-05-2013	74 min.
Artist D	Kinetic	Tilburg	22-05-2013	88 min.
Artist E	Choreography	Tilburg	22-05-2013	78 min.
Artist F	Drawing / Painting / Sculpting	Amsterdam	23-05-2013	95 min.
Artist G	Kinetic / Performance Art	Tilburg	27-05-2013	51 min.
Artist H	Poet	Skype	28-05-2013	45 min.
Artist I	Drawing	Amsterdam	30-05-2013	60 min.

Table 4: Overview Interviewed Artists

An interview protocol was used for loose reference (Appendix 2). It formed a guide for general thematic areas to be discussed in the interview which were based on theories related to organizational creativity as were discussed in the literature study. Two such theories were used, being Amabile's KEYS concepts and Ekvall's Creativity Climate Questionnaire. Further thematic areas were based on reasoning of the researcher and on input of the respondents during the interviews. The interview style contained mostly open-ended questions to allow interviewees for free interpretation and to avoid unintentional guidance of answers. When interviewees did not understand the question asked or had difficulty answering, a clarification was given. As the interview stage progressed the researcher adapted some themes in the

interview as new insights had emerged from earlier interviews. At certain instances, respondents were asked directly on their opinion on the inclusion of certain new thematic areas. This process inherently steered the direction of the research, however as Myers and Klein's (1999) principle of interaction illustrates, the fact that the interaction between researcher and interviewee to some extent influences the outcome of the research is acknowledged and accepted by interpretivists as long as acknowledged. In fact, in interpretive research it is considered an important and again inevitable part of data collection to be constantly analyzing results, which can lead to revision of questions for subsequent data collection as this is part of the iterative process of the hermeneutic circle (Macome, 2002; Myers & Klein, 1999).

5.6 Data Analysis

Data analysis occurred in several stages, which correspond with the division between the literature study and the empirical study.

The literature study at first revolved around orientation and exploration of the research field to determine to which area a meaningful contribution could be delivered. Analysis of the literature at this stage mainly consisted of scanning through large numbers of articles and slowly narrowing down to several areas of interest. After the research question had been formulated the literature study continued to serve the purpose of sensitizing. Although the aim of inductive, qualitative research is to have a completely open mind when engaging in a study, Andrade (2009) states: an open mind is not the same as an empty mind. It is necessary to gain a certain level of knowledge of the field in order to know how to interpret observations. During the literature study a color coding approach was taken to indicate relevant concepts for different parts of the overall study, such as methodology and different concepts related to creativity. Those marked concepts were then synthesized into several chapters. Furthermore, an iterative hermeneutic process was pursued in subsequently studying parts of theory and zooming out to reflect on the whole they were part of. This eventually led to the formulation of several thematic areas for the interview protocol.

In the empirical study, data analysis occurred as early as during the data gathering stage. As was described in the section on data gathering, the interaction between researcher and participant is recognized in interpretive research as a valuable part of the study, in which the analysis can already start to take place (Myers & Klein, 1999). Constant interpretation and evaluation of the interviewees' input can

lead to adaptation of questions. The data gathering is a continuous process of sensing and probing which is essentially partly analysis already.

After the interviews had been conducted, all recordings were processed into elaborate minutes. The listening and re-listening of the audio files resulted in a rich account of the interviews. All substantive statements of respondents were drawn up near-verbatim. The statements were categorized in a spreadsheet according to the thematic areas they related to and from thereon further analyzed. The analysis process was a combination of open coding and a loose associative analysis as described by Walsham (1995, 2006). Open coding pertains to the structurally breaking down of data into categories (Corbin & Strauss, 1990) As Corbin and Strauss describe it: "In open coding, event/action/interaction, and so forth, are compared against others for similarities and differences; they are also conceptually labeled. In this way, conceptually similar ones are grouped together to form categories and their subcategories" (p423).

While an open coding approach was used to order the data initially to gain an overview of different relevant concepts and how they related to each other, this process alone did not suffice for the richness of the data. Therefore the analysis proceeded with a loose associative analysis as described by Walsham (1995, 2006) which consisted of reflective interpretation with iterative mapping as part of the hermeneutic circle principle. This was achieved by doing multiple readings of the minutes, through the consecutive abstraction of key concepts and finally through the use of mind-mapping (Hattinga Verschure, 2013). This rather loose analysis approach has been acknowledged by several Interpretivists as valid and serving the purpose of Interpretive research well (Rubin and Rubin,1995; Walsham, 1995, 2006; Hattinga Verschure, 2012). Interpretive research allows for a less rigid form of data analysis than positivist research because of the recognition of subjectivity and the fact that there is no emphasis on the exact replicability of the study.

During the stage of associative mind-mapping, links with theory were constantly sought for in order to lay the foundation for a cogent line of reasoning. Overall, the analysis aimed at creating a holistic and coherent understanding of the research subject and its context that was 'consistent with a consensus of the views expressed by the interviewees' (Martin, 2003).

6 Analysis and Discussion

After having explored available literature extensively, empirical research was conducted to explore external influences on artistic creativity. In this chapter, the outcomes of this research will be presented. The presentation of the findings is divided according to the general thematic areas that have been established for the interview protocols. In each section, first the findings are discussed after which as a comparison is made between with the existing literature on environmental influences on organizational creativity. Important differences and similarities will be determined. Following this comparison, a discussion will address the comparison on a meta-level and will apply the principle of the hermeneutic circle to establish theoretical abstraction. Based on this several propositions will be developed that form the basis for the final conclusions regarding the research question.

6.1 Analysis

The empirical research consisted of a number of in-depth interviews with artists. During the interviews the artists were asked about external influences on their self-reported creative performance. Interviews were semi-structured and revolved around four thematic areas that were adapted from areas determined in relation to organizational creativity. These thematic areas were used as the starting point for conversation, but since a broad exploration was intended, there was also room for other factors to be discussed. These will be addressed under the heading 'Other factors.'

6.1.1 Social Environment

Corresponding to Amabile's various encouragement factors, and Ekvall's Idea Support, Debates and Conflicts factors, the general thematic area of social influences was defined. This thematic area is to be understood as covering any social interactions and relationships that can potentially affect creative performance. This ranges from private social circles and family to interactions with peers and professional relationships, as well as the influence from the greater societal context.

6.1.1.1 *Private / Family Circles*

With regard to influences from private circles, responses varied significantly. Although all respondents mentioned that support, encouragement and acceptance of family and friends was nice to have, they also stated that if this support would not be present, it would not keep them from making art. Conflicts, or seriously dismal events in private circles were mentioned as having a negative effect on the ability to

perform creatively, because of the fact that one would not have an 'empty head'. Artist A for instance mentioned:

"When I'm in an argument or if there are other nasty things in my private life, then I just can't do it. Then making art is just not on my mind. It's like having sex, if you're not into it it'll just be forced and it won't work. You have to have the right mindset." (10.31)

On the other hand, there were also artists who stated that these kinds of problems did not bother them or even had a positive impact on their creative performance as producing art gave them the feeling of escaping from the world. Artist B described:

"When there are really stressful things going on in my personal life I can still focus on my artwork, as long as I really set my mind to it. It can actually be really nice, because it puts me on a completely different track. I notice that when I have social or emotional troubles, I sometimes even work better. Then I have the feeling that nothing outside of my work is appealing in life and I can hold my focus better. It helps me to go deeper and find more things I can apply to my work." (26.12)

Personal issues were also mentioned by several artists as a source of inspiration to be used in their arts, while others explicitly stated that their art had no autobiographical element and thus private issues did not affect their artwork on a content level.

Another aspect of artists' private lives is the extent to which it demands time and attention. On a very practical level, one of the main conditions to be able to perform creatively is the ability to spend time on it. Having a demanding private life, for instance with children, or with a partner who is not an artist him/herself, can form a serious obstruction. Artist D mentioned that he was spending significantly less time on his artwork since his child had been born. Other artists described how it was sometimes difficult to have a partner who was not an artist him/herself, as an artists' way of life is quite demanding and revolves around art to large extent, which asks for many compromises. Some respondents even said that they had deliberately chosen to shape their private lives around their being artist in order to not let a demanding personal life divert them from making art. Artist E described for instance how she had systematically warded off a social and private life altogether throughout her entire life, because she felt that her entire life had to be entangled with the production of art.

All in all, the influence of private social circles gives a fragmented impression. Each respondent had a personal and different view on how social interactions in these circles influenced their creative

performance. Regardless of the direction of the influence, it can be concluded that an artist's personal life does influence his creativity. Three levels of influence can be distinguished:

- **The process level:**
Hindrane or promotion with regard to getting into the right mindset to be creative
- **The content level:**
To some artists private life can be an inspiration
- **The practical level:**
Hindrane or promotion with regard to the ability to spend sufficient time on art production

6.1.1.1.1 Comparison

When comparing these influences to influences on organizational creativity, it appears on face value as though they are quite different. The artists' account of the different workings of their emotional state as the result of interactions in their private life are not included in Amabile's or Ekvall's lists of factors. However, when changing the perspective to an organizational setting, implicitly the emotional state of employees, or their own perceived well-being is to a large extent determined by the interactions with coworkers and supervisors. Ekvall's Playfulness and Humour factor on the one hand and the Conflicts factor on the other hand, do relate to the same aspects and describe how pleasant interactions with surrounding people have a positive effect, while negative and stressful interactions can have a hindering effect. Although the emotions experienced as the result of interactions in an organizational setting may not be of the same level of intensity or personal interest, it is clear that even with regard to organizational creativity, emotions can be of influence and thus the mechanism is in essence the same.

An interesting difference between organizational creativity and artistic creativity is that some artists have mentioned that emotional distress can actually help them to focus on their creativity as it gives them the chance to 'flee' from the outside world. In an organizational setting this would unlikely to occur as secluding oneself from the organization is generally not accepted. Another difference is the likelihood of the social interactions in a work setting, forming the inspiration for creativity on a content level. This is a logical result of the fact that artistic expression is much less bound to functional purposes and organizational goals. Artistic creativity can therefore associate more freely.

With regard to the practical aspect of private social interactions, this is relevant in an organizational setting as well. Ekvall's factor of Idea Time and Amabile's Resources both address the opportunity one has

to spend time on the creative process. Whenever there is no availability of 'Idea Time,' creativity is unlikely to occur. Whether the time-restricting factor follows from organizational distractions or from personal distractions is not relevant to the influence it has on creativity.

So although on face value the factors did not seem to have a lot in common, after changing the perspective to an organizational setting, many of the underlying mechanisms appear quite similar.

6.1.1.2 Peers and Professional Circles

With regard to influence from peers and professional circles the distinction can be made between fellow artists and possible commissioners of assignments.

All respondents stated that the influence of peers was limited and that they highly preferred to work alone. Being autonomous and being able to choose their own path was expressed as the highest priority. They all recognized the use of schools as they used to occur in the arts quite frequently in older days, but all of them stated to be too individualistic to be part of a school or collective. For the same reasons, living in a city that has a lively artistic and cultural scene was not experienced as a factor of influence. Sometimes peers were used as a sounding board, but in the end the artists followed their own intuition. Artist F said:

“As long as I keep on feeling this inner urgency then it just doesn't matter. Then they can say what they want, but I'll keep doing what I'm doing. So someone will have to come with extremely good arguments for me to listen to them” (45:10)

That same artist did mention that sometimes it was nice to talk to other artists about their work, in order to be able to discuss the choices and reasoning they made in their artwork, especially in cases where they would be familiar with each other's frameworks and approaches (43:27). On the other hand, several other respondents said that they had no desire whatsoever to discuss their work with others (Artist A, 11:58; Artist E, 35:37).

A distinction was made between the actual creation stage and the later execution and fine-tuning stages. While feedback from peers during the creation stage was rigorously dismissed by all respondents, suggestions regarding execution would be taken into consideration. Artist A described that he had to do the art himself, but would allow others to help with the craftsmanship. Artist F has a part-time job as technical advisor at the Dutch Royal Academy for Visual Arts, a post-doc residency program. He serves as

a technical advisor and does exactly as was described by Artist A: advise on technical execution, not on artistic aspects.

With regard to professional relationships when the artists had assignments or had to produce work for a gallery or exposition, there were two relevant aspects that were mentioned by the respondents. The first element pertained to the content of the artwork. In this respect, the artists' attitude was very similar to that towards peers: they would not allow any interference with their own artistic vision. Artist B states:

"I never make artistic compromises. I will never bend and do what they [commissioners] want. I just can't because then the artwork will not have my character, while that's my product, my stamp. So then I'll just have to find a way to make my work connect to what they want." (7.42)

She also mentioned that this process of finding a match between what a commissioner wants and what is her own artistic identity is challenging and stimulates her to broaden her horizon. None of the other artists reported a working like that. However, an element that they did report in, is the effect of time-pressure as the result of a work relation. All respondents described that they were more productive if they had a deadline. None of them said that time pressure would block their creativity and all were confident that they would also be able to deliver, while maintaining their personal quality standards. Time pressure resulting from a professional relationship thus yielded a positive effect on artistic creativity.

On a more meta-level, an issue that was mentioned by almost all artists interviewed was the tension between being an artist and being part of the arts industry. They described how being an artist does not just consist of producing art, but also of being an entrepreneur or a salesman. That is what the art world demands, but all respondents experienced this as an impediment to artistic creativity, because it was considered an unwelcome distraction and a factor of pressure regarding the type of art they 'should' produce. Several respondents also expressed a feeling of incompetence in this area, or even a strong resentment. Artist E stated:

"At the moment I'm just sick of that entire world, I've just had it with it. I have a problem with the necessity to follow trends, to follow taste and all the political sensitivity that comes with it. I think that's extremely tiresome. The whole dynamics of that world run counter to my feeling. I just produce a piece and the process is what it's all about. And when it's done, it's done. I don't care if many people can see it. To me it's about that inner urgency to make art. And I'm convinced there's a permanent tension between the artistry and the whole organization around it. If people would

be honest they would acknowledge that. But hey, people have to make a living and in this world you make money if you do what is expected.” (30:30)

Other artists made comments of a similar tenor although it did not affect their creativity to the same extent. For some artists the lack of interest in participating in the ‘organized’ art world resulted in less exposure or remuneration than they would ideally like to accomplish. However, they chose to focus on producing art instead as they considered that to be core. Artist D even mentioned that it might be necessary to find someone who could take care of the organized part for him. It must be stated that, although most artists expressed nuisance about the demands of the art world, most of them appeared to have found their way with it to preserve their ability to perform creatively. If anything was compromised it was the active involvement in the art world with its entrepreneurial demands.

Overall it can be concluded that the peer and professional circles impacted creative performance on several levels. The factors of influence were found to have an impact in the following manner:

- **The process level:**

Stimulation of production as the result of a work relationship and time-pressure related to this.

Demands of the art world as distraction from having a clear focus on the creative process.

- **The content level:**

Discussing work with peers could lead to affirmation or new insights

- **The practical level:**

Less time to spend on creating art, because of the need to ‘sell’ oneself

6.1.1.2.1 Comparison

The factors of influence described above, show some similarities and differences with those influencing organizational creativity.

When asked about the influence of their relationship with peers or with commissioners, interviewees were all extremely resolute in stating that they would not allow any kind of influence on their own artistic process. Terms as ‘autonomous’ and ‘individualistic’ were mentioned by a number of respondents. It was made very clear that they would in no way be willing to make compromises or even consider creative input from others. Although both Ekvall (1996) and Amabile (1996) have distinguished a factor related to autonomy and freedom, their interpretation of autonomy is different than what was meant by the artists. Autonomy and Freedom as influencing factor in organizational creativity pertains to an employee’s freedom to schedule, plan and carry out his work activities. Ekvall describes how this kind of freedom

leads to a higher level of information exchange, discussion of problems and alternatives, the development of initiatives beyond regular work tasks, etcetera. In other words, giving employees a higher degree of autonomy leads to a greater likelihood of creativity to occur. This is not what autonomy stand for in the context of artistic creativity. Autonomy appeared to be considered a virtue that would be compromised if input from peers was permitted. The feeling of entitlement to autonomy resulted in a very limited influence of interactions with peers and other professionals in the field. This is counter to the proposed result of autonomy in an organizational setting, where employee autonomy is thought to lead to higher levels of interaction.

Although some artists have mentioned that they like to sometimes use other artists as a sounding board, they never seek for creativity to occur from this interaction, but rather see it as a chance to affirm their own reasoning. This can thus not be considered the same as Ekvall's Debate factor or Amabile's Work Group Encouragement and thus marks another important difference with organizational creativity.

Despite these differences, there is also a major similarity. Artists have expressed in the interviews that they experience the organizational, formal art world or art industry as an impediment to their creativity. On the hand they considered the case because the art world demands time and attention to be a part of and on the other hand, the art world exerts pressure on the artists to produce according to trends or taste. Amabile's factor of Organizational Impediments can be seen as the organizational equal of this factor. She describes how internal strife, conservatism, rigid formal management and bureaucracy result in a controlling environment in which creativity is less likely to occur.

6.1.1.3 Societal Circles

When asked about whether there were any influences on artistic creativity on the larger societal or political level, the answer all respondents gave was negative. Societal issues did not for an inspiration for the content of their artwork and facilities from the government were not experienced as crucial. Most of the respondents expressed appreciation for subsidies or other facilitating factors the government provides, but most of them also stated that even if those facilities had not existed they would still be practicing art. Of all artists interviewed, only one stated that she maybe would not have become an artist if it hadn't gone so easy, almost happened by accident. It appeared that to most artists governmental support was a 'nice-to-have,' but not a factor of any significance in their creative performance. Artist D said that:

“Art will always be made, regardless of whether there are subsidies. However, subsidies can come in handy and can help set up projects that take those arts to the next level.” (63.15)

An issue that came up in one of the interviews was the freedom to produce art. Although the Netherlands are a free country and matters such as oppression and limited possibility for expression are not or barely present, artist G described that he felt he had to be ‘permitted’ by society to create art. He stated:

“You need a social alibi, you need to fulfill some kind of purpose, for you to be accepted by society. There is always a conflict between the people who make an active working contribution and those who potentially could, but don’t. You have to be ‘allowed’ to not work and to make art. [...] Society needs to bestow legitimacy on you, acknowledging that the work you are doing is purposeful.” (38:30)

As the legitimacy of producing art exists, it does not influence the occurrence of artistic creativity directly. Furthermore, the legitimacy issue would be less of an issue when an artist has a part-time job.

The societal circle thus did not appear to be a very significant factor of influence on artistic creativity. But artists acknowledged that this may be different had they lived in a different country with different circumstances. The neutral and even positive climate in the Netherlands for the creation of arts, makes the influence limited. Influence mainly exists on the following level:

- **The practical level:**

Subsidies and the governmental support system can make the creation of art ‘easier’.

6.1.1.3.1 Comparison

The interviews showed two main aspects of societal influence. First, there is art facilitation by the government in the form of subsidies, income supplements and for instance the provision of spaces for art studios. Although these facilities were not deemed crucial to artistic creativity, they were labelled a ‘nice-to-have.’ Amabile has included the factor ‘Resources’ which may have a more crucial role in an organizational setting. It is questionable whether creativity would occur to the same extent if an organization would not provide the resources, as within the more rigid structure of functional goal pursuit, the inclination to be creative is not a core activity. In this sense, the comparison between the facilitating

role of the government and the facilitating role of the organization yield similarities, but differ in the extent of their impact.

The second aspect mentioned in relation to societal influence, is the fact that an artist has to be 'permitted' by society to create art and not partake in regular economic productivity. The product of art has to be legitimized and acknowledged as purposeful to be socially accepted. In the organizational setting, this is a highly important aspect. For creativity to occur in organizations, it needs to be clear that it will be accepted, that creativity is legitimate input in the performance driven system. The concept of legitimating thus relates to several of the factors formulated by Amabile such as organizational and supervisory encouragement and also by Ekvall with Idea Support, Trust/Openness and Risk Taking.

On both of the above discussed aspects, organizational creativity and artistic creativity appear to be quite similar in their response.

6.1.2 Physical Environment

Although the physical work environment was not a factor mentioned by Amabile or Ekvall to be of influence on organizational creativity, it was included as a general thematic area in the empirical research of this study nonetheless. It was mentioned by Amabile with regard to environmental influences on creativity in general and the aim to broadly explore factors of influence required inclusion to be comprehensive. Furthermore, organizations that are known for their outstanding creative climate such as Google have implemented many measures to the physical work environment as they believe it contributes to the organizational creative climate.

Indeed, the interviews with artists yielded interesting results on the physical work environment. Each artist had his own preferences and there did not appear to be a universal formula for creating a specifically conducive creative environment. Having enough space and light were mentioned several times. Some artists preferred to have music playing. Also the need for a studio or workshop to have a comfortable temperature was brought up. This need was two-sided: on the one hand a comfortable temperature contributed to ‘feeling good,’ but on the other hand there was also the practical aspect of hands getting stiff from cold, which several artists stated that they preferred to have open closets and all their materials displayed freely and openly. Artist D explained:

“You see only open closets here. I have to display newly bought materials to myself, so when I look around I can quickly see solutions while I’m at work. That makes this workshop crucial for me to work pleasantly. It’s a full, crowded space in which I constantly get tickled and inspired. It might appear to be chaotic, but it’s an organized chaos. I know exactly where to find everything.” (21.48)

The fact that Artist D mentioned that his workshop was crucial to him for his artistic creativity, forms the core of why the physical environment is a relevant factor. All artists interviewed stated that they referred to have a place of their own to work in, regardless of whether this was a studio, simply at home, or even the laundry room in the house: as long as it was theirs to use. This was associated with the feeling of being free to do what they wanted in this space and also with the possibility to seek solitude whenever they pleased. Artist C said:

“The actual creative production is what I prefer to do in my studio. It’s about having your own place. But I think that in the end it’s more the idea of the studio that matters [than the physical presence, JHV], it’s in your head. Just the idea that you can do whatever you want – even if that’s nothing

outrageous – just having that feeling of freedom, that’s what it’s about. But it might be an illusion.”
(18:27)

The illusion artists C referred to was an issue discussed in most interviews. Almost all artists said that they preferred to have their own space to work, in which they could create an atmosphere to their liking, but all of them also said that if they absolutely had to, they would be able to perform creatively anywhere. This would thus apply to situations where there is time pressure or some other kind of externally imposed urgency to create. When this externally imposed urgency is not present, the artist has to ‘find’ this urgency within himself. All respondents described that they need to find the right state of mind in order to be creative. Being in their preferred physical environment can accommodate the process of getting in the right state of mind, or at least make them believe they can get to that state easier. The comparison was drawn between people thinking they can only win a game if they wear their lucky underwear and artists thinking they can only perform creatively if they’re in their studio. But regardless of whether it is a psychologically constructed need, or a real need, being in a favorable physical environment can have a positive effect on artistic creativity.

Important to note here is the fact that the physical environment contributes only to getting in the right state of mind. All artists interviewed described that all of their preferred circumstances, become practically irrelevant once they have reached the creative flow. The concept of flow as described by the respondents fits well with Csikszentmihalyi’s concept of flow (2009). As this appears to be a larger theme, this will be addressed further later on.

Concluding, the physical environment is a factor that influences artistic creativity on the following level:

- **The process level:**

Being in the preferred physical environment is highly important to get into the right creative flow and thus facilitates the creative process.

- **The practical level:**

When an artist wants to produce a work of art that requires certain specific characteristics of the physical surroundings, for instance in terms of size or light. In that case those physical characteristics are a minimum requirement.

6.1.2.1 Comparison

Comparison between artistic creativity and organizational creativity on the aspect of the physical environment is difficult as it is a factor that was not originally included in Amabile's or Ekvall's factors of influence. However, based on observations from established creative organizations such as Google, certain inferences can be made about the way the physical environment is used to affect the likelihood of creativity to occur. In Google offices, spaces are set up in a way that it is very easy to interact with coworkers. Bright colors are used and playful elements are present such as Foosball tables and video games (google.com/about/jobs/lifeatgoogle, 2013). The physical environment is thus used to enhance the factors of Dynamism/Liveliness and Playfulness/Humor as defined by Ekvall and the Collaborative Idea Flow as part of Organizational Encouragement as defined by Amabile.

On this aspect, artistic creativity appears to be distinctly different. It was already established that due to the perceived virtue of autonomy, interaction with peers was not perceived to have a significantly positive effect on artistic creativity. Therefore, using the physical environment to stimulate this, will not do any good. In fact, for artists, having a workspace of their own is again connected to being autonomous as it enables them to do whatever they please in this space they can 'own.' Having a personal workspace is thus an important resource for artistic creativity. The feeling of freedom contributes to getting in the right mindset. Regardless of the actual physical characteristics of the space, an artist has to be able to create an atmosphere that makes him feel safe and secure, comfortable, at ease and inspired. This inspiration can be enhanced by creating stimulants, for instance by not having any closed closets, but displaying all available materials out in the open. This last aspect may be comparable to the effect of Ekvall's Dynamism/Liveliness factor, which revolves around the occurrence of new things that spur new ways of thinking. However, some artists favored a clean and minimal environment, which makes the general applicability of this factor questionable.

Overall, the aspect of the physical environment seems to be distinctly different in an organizational setting than in an artistic setting.

6.1.3 Resources

Based on Amabile's factor Resources and also Ekvall's Idea Time, the general thematic area of resources was used in the interview protocol. Open questions were asked about the extent to which things like time, money, materials and any other resource could have an influence on their artistic creativity. All of them were mentioned, but with varying degrees of importance.

The very first things any of the respondents mentioned when asked what they needed to perform creatively were time and space. As the space has been discussed in the previous section, this will not be further addressed, but it should be clear that having access to a workspace can be considered a resource as well. With regard to time: having completely dedicated time in which no interruptions or distractions would interfere with the creative process, was expressed as crucial. Artist A described:

"I have to be alone and I have to know that I have all day and nothing else to do and that no one will stop by and interrupt me. Otherwise there's too much going on in my head and I'm too stressed [...] If someone comes it is all ruined, then the magic is gone. That creative process is something really intimate" (05.55)

Any kind of constraint on time, such as having the care for children, having a part-time job for a steady salary, or having to deal with the entrepreneurial and organizational side of the art world, was considered an impediment for creativity. The impediment played a role in the time needed to get into the creative mindset, in other words: the lead time. But it also played a role when the artists had already reached the right flow, as it shortened the timeframe the artists could stay in the flow.

In relation to time, money as a resource was also mentioned. Money is of course necessary to live and ideally artists earn all money needed with their artwork. If they manage to do so, then money does not have an influence on artistic creativity. However, if the money earned with art is not sufficient and a part-time job has to be taken on, then this reduces the time the artist can spend on being creative and it becomes a nuisance. However, having sufficient money was more a hygiene factor than a factor that could in itself stimulate artistic creativity.

A final category of resources that was mentioned in the interviews, were the materials used by the artists. The extent to which this factor was of influence depended highly on the type of art produced. It was for instance less relevant for the dance choreographer, than for the kinetic artist. Whereas for some

kinds of art the materials are purely instruments, for a visual artist the materials can be crucial as they could become part of the story the artist wants to tell. Artist D tells:

“Materials are really important to me. I love working with metal as it’s a material that is fast to use and can be re-used and reshaped. Although materials are always just the means, materials really can inspire me.” (56:13)

Other artists also spoke of the interplay between materials being practical means to create art on the one hand and being a source of inspiration on the other. Sometimes available materials could simply facilitate the execution of ideas, while at other times the availability of certain materials could inspire new ideas for artwork as well. In this sense, creative materials can form a stimulant to creativity as well as simply facilitate it. Artist C said:

“Symbolically I really like my paper and colored pencils in all their simplicity. I find that enticing. But on the other side certain other practical matters facilitate new creative ideas. If I hadn’t had the possibility to use a large studio space I probably would not have been inspired to make really large drawings. So that’s how there’s really an interaction taking place.” (37:02)

When asking respondents if they considered drugs and alcohol as resources influencing their creative performance, all of them were resolute in stating that this was not the case. All respondents stated that in order to be creative they need a sharp mind and any narcotics would negatively impact this. Artist G said:

“I’ve tried some of those narcotics myself, just out of curiosity, but the disadvantage of it is that when you use them more often you develop dependency and the working of the stuff changes. The dependency prevents you from being innovative and it also changes your personality which also inhibits spontaneity and creativity.” (44:50)

Respondents who smoked cigarettes indicated that they also did while producing art. One artist described how he appreciated to drink a beer while working. Not because of intoxication, but because it simply belonged to the atmosphere of the creative process (Artist A, 40:56).

Altogether several resources-related factors were mentioned as having an influence on artistic creativity. Time appeared to be a highly dominant and crucial factor that was mentioned over and over again. But money and materials were also relevant. Summarized, the factors influenced artistic creativity in the following manner:

- **The process level:**

Having enough time facilitates the ability to get into the right mindset to engage in the creative process

- **The content level:**

Materials can form a source of inspiration for new art-content

- **The practical level:**

On a practical level, time is necessary to execute the crafting of arts, materials are necessary to actually create works of art and money is necessary to pay for a living.

6.1.3.1 Comparison

The thematic area of resources shows quite some overlap with issues previously discussed. The most important resources mentioned are time, space and money (which is itself related to time).

The time factor as described by artists is the same as the Idea Time factor distinguished by Ekvall. Uninterrupted, devoted time for the creative process is crucial. In both the organizational context and the artistic context time is something that the 'creator' has to be allowed as well as has to create himself. 'Allowed' then refers to the organization permitting its employees to spend time on a creative endeavor, and in an artistic context refers to the extent to which social and financial circumstances allow for dedicating time to art. On the other hand, the creator has to make time himself as well, as available time can easily be consumed by small distractions.

Space as a factor was described in the previous section and was found to play a different role in organizational creativity.

Money then is a final resource that is mentioned by artists mostly in relation to the time they can spend on creating art. If the artist has to have a part-time job in order to pay for his living, this is a distraction from being creative. In an organizational setting, money plays a similar role and is connected to the organization permitting employees to pursue creativity. In organization 'time is money', meaning that if an employee spends time on a creative project that may not directly show its economic value, it costs the organization money (often later the economic value will become apparent). Having the time to be creative in an organization is thus also related to money. However, in an organization, the decision on time is made by higher management, while in an artist's life, the decision is dependent on the artist's prioritization.

6.1.4 Reward & Recognition

The thematic area of Reward & Recognition was derived from Amabile's encouragement factors as well as Ekvall's Idea Support factor. Whereas the Social Influences thematic area that was previously discussed, was focused on the broad social circumstances in which the artist operates. This thematic area specifically focuses on incentives. These incentives can take the form of recognition from friends, family, peers and the field in general. But incentives can also consist of remuneration, subsidies or awards.

From the interviews it appeared that respondents really appreciate any kind of recognition, whether it comes from family and friends, the general public, peers or experts from the field. Appreciation or awards from the field are highly valued as this is perceived as best founded by expertise. With regard to the general public, artists expressed that they found it specifically satisfying to touch people with their work, evoke an emotion in them or engage in a conversation with them about their work. Most of them confessed to their desire to make art deep down being connected to wanting to show their work to an audience. But despite this desire all respondents stated that they would still make art if no one would ever be interested in seeing it. Artist D said:

"I get so much satisfaction just from working on [my artwork]. Coming up with new ideas, seeing something arise under your hands. And then presenting it of course: seeing people who are surprised, smiling because they really like it. [...] However, recognition is not what it's really about. I make my art for myself in the first place and I hope to get the chance to amaze people with it. [...] But in the end it doesn't matter what the outside world thinks of my art, because I will always keep on making things. [...] It's a drift, it always goes on." (15.02 & 46.13)

This urge, or the feeling of inner urgency to produce art was described by almost all interviewees. In their account of the influence of recognition and reward, this was a constantly recurring theme: regardless of recognition, their intrinsic impulse would drive them to always keep on making art. External incentives could thus have a positive effect, but could never drive artistic creativity by itself. Interestingly, external motivators did not seem to have a negative effect on intrinsic motivation. This is counter to what motivation studies have found in previous research (Pink, 2010), where external motivators were in fact detrimental to intrinsic motivation. Respondents described how negative feedback or setbacks in the work process could lead them to be frustrated, but it would never for the long term block their creativity.

When considering situations where artists would produce works of art for a commissioner, the remuneration only had limited impact. If the respondent engaged in commissioned work at all, they

always made it their main priority that their artistic integrity could stand firm. A large remuneration could not tempt them to bypass their intrinsic motivation to create their own art.

Summarizing, reward and recognition have the potential to have a slight positive impact on artistic creativity, while the reverse is much less true: negative feedback has little effect as respondents feel a strong urgency to create art. This drive appeared to be not significantly affected by any external incentive.

Reward and Recognition thus influences artistic creativity on the following level:

- **The process level:**

Receiving positive feedback or recognition can be a stimulant to artistic creativity, but is not crucial for the creativity to occur

6.1.4.1 Comparison

When considering the effects of reward and recognition on artistic creativity as appeared from the interviews, it must be concluded that it is rather limited. The inner urgency that artists experience is the driving force behind the occurrence of the artistic creativity and external reinforcement can have a positive effect, but is not crucial. Negative reinforcement surprisingly also has a very limited effect as all artists have stated that they would still make art if no one was interested in it.

This is contrary to the situation in organizations. Although the emphasis on intrinsic motivation exists in organizations as well, both excessive positive reinforcement and negative reinforcement have a negative effect on intrinsic motivation. Amabile's Organizational and Supervisory Encouragement factors both state that reception and response to creativity should be favorable to make the climate more susceptible to creativity. She describes that the threat of highly critical evaluation of creative performance has shown to undermine creativity. This effect does not seem to occur with artistic creativity, as the creative urge is too strong to be oppressed by such criticism. This is thus a significant difference between artistic creativity and organizational creativity.

6.1.5 Other factors

During the interviews several other factors came up that did not fit clearly with one thematic area, or spanned several thematic areas. Therefore these are addressed separately. The first factor is 'stimulus', referring environmental input for inspiration. Apart from that two more abstract factors of influence could be distinguished: Rest and Safety. These two factors were repeatedly mentioned by respondents as a favorable or even necessary conditions for them to perform creatively. For both factors it can be argued that they are more a perception of the artist than an objectively present environmental condition and thus is related to the creative person, rather than press. Another view could be that both rest and safety are states of mind that can be reached through a process, which would place it under the process stream of research. However, the artists' perception with regard to rest and safety is heavily influenced by environmental factors, which justifies including them in this study.

6.1.5.1 Stimulus

In several interviews artists have mentioned their environment as a source of inspiration for the content of their art, on a conscious or subconscious level. Respondents described how they seek stimulus for their associative thinking process. The inspiration for art work thus is an interaction between the inner urge artists feel to create art and external input to shape the content of the art. Artist A explained how he believed that these external influences were inevitable:

"For inspiration there is always external influence. You just become contaminated with the outside world. It's hard to say: this is what triggered it, but you're just shaped by the world around you and probably unconsciously this becomes the motive for using certain subjects as themes in art." (49:30)

Some respondents even described that they actively seek to expose themselves to as many stimulants as possible. Artist G states:

"What works well for me is if I stand up and walk around; I can't sit still. It's all a process of the mind, because unconsciously that keeps on working. [...] Just seeing the environment around me change, that's when the ideas pop up. So I actively seek that changing environment, I seek that stimulant." (31:30)

- **The content level:**

Stimuli from the outside world unconsciously trigger associations which may lead to inspiration for new artwork

6.1.5.1.1 Comparison

The Stimulus factor described above describes the environment functioning as a trigger for creative associations. This is a factor that is well represented in Amabile's and Ekvall's lists as well. Ekvall expresses the importance of stimulants through the factors of Challenge and Dynamism/Liveliness. In Amabile's account it is included in Work Group Encouragement where a diverse work group can provide the stimulants. There is thus a significant similarity. However, as was also mentioned with regard to the physical environment: not all artists seem to have the same preference and thus it is difficult to determine to which extent this factor can be applied on a broader scope.

6.1.5.2 Rest

The factor 'rest' is closely related to the resource time, but it extends beyond that. Rest pertains also to psychological rest, which brings many of the previously discussed factors together, such as relationships and resources. Artists have mentioned that they need to feel good, have peace and quiet and have a certain inner serenity in order to be able to get in the creative state of mind. Artist F said:

"I need rest, peace and quiet, so not too much distraction, no children running around. If I constantly get disturbed in the process, in my concentration, I can't get much done. And I need inner rest as well. If I'm not feeling well, I can't do anything either. [...] There is a difference however, in creative work or just execution, which is easier under less favorable circumstances." (06:42)

Artist D gave a similar account:

"I often work at night because that's the only time I'm at rest. Then I won't be disturbed by my daughter or girlfriend, or by the idea that I quickly have to go to the store to pick up some materials. At night I can work in peace and all the solutions are in my workshop. During the day I can work on practical execution or fine-tuning, but at night is when the ideas come and when the real creativity occurs." (10:38)

The factor rest, is closely related to the state of flow artists have described. One respondent compared this to pushing a very heavy ball forward. In the beginning this take a lot of effort and all the circumstances have to be just right to be able to get the ball moving. Once the ball is finally moving and the state of creative flow has been reached, it is much easier to keep it going and to ward off distractions. Rest is a necessary condition facilitating the initial movement of the ball (Artist B, 15:20).

6.1.5.2.1 Comparison

The extent to which time is necessary for both artistic and organizational creativity has yet been elaborated on. The factor 'Rest' extends beyond time alone and could be considered a sort of peaceful state of mind resulting from a balance in several factors such as relationships, resources, emotional state, etc. The fact that most of the included factors can be considered applicable in an organizational context as well implies that the combined factor 'Rest' can be considered relevant with regard to organizational creativity.

However, there is an important difference. When using the analogy of having to push a heavy ball into movement, it is questionable whether this also applies to organizational creativity. For artists, creativity is the core product. In organizations, creativity is often a byproduct of a regular work process. A task is to be solved and a creative solution is proposed. Or in the process a creative improvement possibility is recognized and then pursued. Here creativity occurs in the slipstream of functional work. Perhaps a state of flow can also be established in the regular work an employee does in an organization. The question is then, whether in those cases the ball actually lies still.

So although the factor 'Rest' may be relevant to an organizational setting as well, it is questionable whether it is as crucial as it is to artistic creativity.

6.1.5.3 Safety

In the same category of facilitating the movement of the ball, is the feeling of safety. This feeling pertains to both being in a safe and secure physical environment where it is possible to 'sink' into the creative flow. It is also related to the feeling of being permitted to produce art, it being accepted and received well by an audience.

Most artists have created a 'safe' situation around themselves in terms of their work environment as well as in terms of a social and professional support system. They have either a comfortable and secure workspace at home or a studio or workshop in which they feel comfortable and at ease. Furthermore, almost all respondents had surrounded themselves with artistically oriented friends, who were accepting and supportive in good times and bad. In terms of professional safety, several respondents described that they have a solid and continual relationship with a gallery, representative or other institution. Artist F described:

“Safety can be accomplished by having a certain place to exhibit work. If you for instance exhibit at a gallery or a museum, then there’s a link in between you and the public. You’ve been invited by them based on your work, so people assume you must have a certain quality. The gallery takes a risk for you. I don’t like doing expositions for a public were those criteria haven’t been met and maybe that’s how I create a certain safety for myself beforehand. It’s not that I wouldn’t be able to defend myself, or explain why I made certain choices. But there’s always a degree of uncertainty, because you make something really personal. It represents your vision on life. Of course that’s a very romantic way to look at it.” (21:14)

The safety factor is thus a factor that can be engrained in the artist’s life, which may not be experienced consciously at all time, but which functions as a hygiene factor for artistic creativity.

Altogether both rest and safety affect artistic creativity on the following level:

- **The process level:**

Having rest and safety are crucial for being able to get into the creative flow

6.1.5.3.1 Comparison

The factor safety refers to the feeling one has that it is ‘safe’ to make creative ideas public. The factor as described above pertains to a macro as well as a micro level, spanning from safety on a societal level to safety in the physical work environment. The comparison made with the legitimacy that has to be placed in the creative work, applies to this factor as well. Safety in an organizational setting can be provided through Organizational and Supervisory Encouragement, Idea support, support of Risk taking and Reward and Recognition for creative ideas. All these factors contribute to a safe environment in an organization. In essence the importance of safety is the same in organizational and artistic contexts.

6.1.6 Cross-Discipline Analysis

To be able to make a comparison between factors influencing organizational creativity and artistic creativity, it was necessary to first explore and map the factors influencing artistic creativity as this had not been done before. In order to do so, a very broad exploratory empirical study was conducted in which the goal was to assess any and all factors that had an influence. In line with this, the decision was made to interview a broad range of artists, across disciplines. Following the criteria for respondent selection, respondents were chosen from several artistic disciplines. It is now interesting to evaluate to which extent their answers differed. The artistic disciplines represented were poetry, drawing, sculpting, kinetic art, composing (music) and choreography.

Interestingly, findings across disciplines were surprisingly similar. The thematic areas of social environment and reward and recognition did not show any remarkable differences. Naturally each respondent gave his or her own account of things which resulted in some individual differences that could be linked back to factors like age and personality. However none of these relatively small differences appeared to be related to the discipline the interviewed artists worked in. General underlying themes such as the pursuit of rest and safety were the same across disciplines.

The other thematic areas of physical environment and resources do show slight differences, but these were mostly related to practical issues. The most important theme that all interviewees mentioned was that they preferred a physical workspace in which they felt good. One important difference between two categories of disciplines was found. Open closets, a rather busy and cluttered workspace was preferred by the kinetic artists while a cleaned up, minimalist and peaceful workspace was preferred by the poet and the singer songwriter (for writing lyrics). The kinetic artist and poet gave the same explanation for this. Artist H (poet) said:

"I prefer to be creative when my house is neat and clean. You start with order, an empty sheet and when the space is neat you also have a calmer mind. [...] Then you don't constantly get distracted by the thought: I still need to clean this or that up. Apart from that I just feel better in a clean house. That has to do with the fact that for me the creative process completely occurs inside my head and I want to minimize all outside stimulants." (20:35)

Here differences in respondent answers could thus be traced back to their art disciplines. Art forms related to verbal skills, for which the creativity occurred mainly 'inside' the artist's head, less external

stimulants were preferred. Counter to this were the kinetic artists who indicated that the art came into being under their hands, rather than in their minds.

Furthermore, several visual artists stated that they found music in their workspace pleasant. For the choreographer the music to accompany the art form could actually be considered part of the art form itself, while the choreography is often made to music. Although the topic was not discussed in the interview, it is conceivable that the singer / songwriter does not play other music than his own in his workspace while creating his art.

Apart from this, there were also practical aspects. For the choreographer the size of the room was very important depending on the scale of the choreography. Artists E (choreographer) said:

“I always wanted a large room with a high ceiling. It’s nice, that when you make something, you just have enough space for it. I now make smaller choreographies and so now I don’t as much space as I used to” (56:36)

Contrary to this, several visual artists described how the size of the physical was not so important, but that the light in the room was more important. There had to be sufficient light – whether natural or artificial – (Artist C), but not too bright (Artist B). However, none of these last issues were described to truly influence creativity itself, but rather influencing practical ease. The same appeared to be the case for the thematic area of resources. On issues such as time, space and money, no significant differences were observed. With regard to materials for the different disciplines, differences were found on a practical level. As the analysis of resources has already indicated, for certain art form such as kinetic art, the materials used influenced the artistic creativity on a content level as well as on a practical level. This seemed to be less the case with for instance artists drawing.

To conclude, several subtle differences were found across artistic disciplines, but most of these were fairly logical and related to the practical nature of the art form. Important themes that run as a red line through the interviews such as the need to feel good and to find rest and time, were all universal in the different disciplines.

6.1.7 Overview

Factor	Level of Influence Artistic Creativity	Equals Influence in Organizational Creativity	Amabile or Ekvall Factor	Similar (+) or Different (-) Behavior	Underlying Principle
Social Environment					
Private	Emotional State	Employee Wellbeing	Playfulness / Humor Conflict	-	Flow
	Practical / Time	Time	Idea Time Resources	+	Flow
Peers / Professional	Autonomy	-	-	-	Urge
	Sounding Board	Exchange of ideas	Debate Work Group Encouragement	-	Urge
	Organized Art World	Bureaucracy, rigidity	Organizational Impediments	+	Flow & Urge
Societal	Resources provided by government	Resources provided by organization	Idea Time Resources	+	Flow
	Legitimacy	Permission for creativity	Organizational & Supervisory Support	+	Flow
Physical Environment	Autonomy / Freedom	-	-	-	Urge
	Flow	-	-	-	Flow
Resources	Space	-	-	-	Flow
	Time	Time	Idea Time Resources	+	Flow
	Money	Resources for Time	Resources	+	Flow
	Materials	-	-	-	Flow
Reward & Recognition	Positive Reinforcement	Appreciation for ideas	Idea Support Organizational & Supervisory Encouragement	+	Urge
	Inner Drive	Intrinsic Motivation	Organizational & Supervisory Encouragement	-	Urge

Table 5: Overview Comparison Factors Influencing Artistic & Organizational Creativity

6.2 Meta-Level Analysis: Applying the Hermeneutic Principle

Looking at the different identified factors and how they compare to factors influencing organizational creativity, a rather differentiated image emerges. Several factors are highly similar, such as the need for time to spend on the creative process. Other factors differ completely such as the need to interact with other people to enhance the creative process. Some factors simply don't have an equal or are difficult to compare as the contexts of organizational and artistic creativity are so different. In some cases artistic and organizational creativity are influenced by the same factor in the same way, but to a different extent.

If an attempt was now made to answer the second half of the research question 'Can a meaningful distinction be made between organizational creativity and artistic creativity, based on the way they respond to environmental factors?' based on the analysis so far, the answer would have to be: Yes, a distinction can indeed be made as the factors are not equal. However, in order to make this distinction a meaningful distinction another level of analysis is desirable. Interpretive research bases generalizable findings on grounding unique instance in theory to more generally applicable theories and concepts in order to establish a level of theoretical abstraction. Following the Hermeneutic Principle, the individual parts should be interpreted in relation to the whole they are part of and in accordance with the Interpretivist approach be firmly grounded in theory. This thus forms the basis for a comprehensive level of analysis.

When interpreting the distinguished factors influencing artistic creativity in light of the bigger picture, it becomes apparent that they can be traced back to two main underlying principles, which drive the response to environmental factors. One prevalent theme that is related to many factors of influence is the pursuit of the artist to get in a state of creative flow. The other theme that appears to be defining in the way artists respond to environmental factors is the inner urgency they feel to create art. All determined factors can be linked to one of these two underlying principles. See the table above. The following sections will elaborate on the two principles, after which a final section will reflect on how these principles compare to organizational creativity.

6.2.1 The Pursuit of Creative Flow

The first of the two issues that emerged is that artists are in the constant pursuit to achieve a state of creative flow. This results in the fact that environmental factors are experienced as favorable if they contribute to achieving flow. Flow is a term introduced by Mihaly Csikszentmihalyi and is essentially a process related phenomenon. Although this study initially specifically focused on press – environmental factors - process related factors were considered out of scope. However, once the data had been collected, it soon became clear that the environmental factors were inextricably connected to the process factors. In practically all interviews, the state of flow – even if not specifically called ‘flow’ – became subject of conversation and it became very clear that the environmental factors were at the service of reaching flow. Therefore, the scope of the research had to be expanded to include flow – even though essentially process related – in order to gain a thorough understanding of the subject. Before looking at the use of flow in this context, it is useful to elaborate on its meaning. Therefore it is necessary to take a small side trail into theory again.

6.2.1.1 *The Creative Process and Flow*

Csikszentmihalyi (1992, 1997, 2009) noticed during experiments that once a creative person became fully engaged in his work, he would not be sensitive to distractions or discomfort, they were simply too absorbed in their task. He questioned the respondents on it and they all described the same sensation, which he named ‘flow’: the optimal experience when things are going well, seem to go almost automatic, effortless, while the creator is highly focused. He identified the following characteristics of this state:

- “Intense and focused concentration on what one is doing in the moment
- Merging of action and awareness
- Loss of reflective self-consciousness (i.e. loss of awareness of oneself as a social actor)
- A sense that one can control one’s actions; that is, a sense that one can in principle deal with the situation because one knows how to respond to whatever happens next
- Distortion of temporal experience (typically, a sense that time has passed faster than normal)
- Experience of the activity as intrinsically rewarding, such that often the end goal is just an excuse for the process.”(Nakamura & Csikszentmihalyi, 2002, p90)

Flow can be experienced during the creative process, which has traditionally been conceptualized as consisting of five steps which Csikszentmihalyi (2009) describes in his book ‘Creativity, Flow and the Psychology of Discovery and Invention’: preparation, incubation, insight, evaluation and elaboration. In

the preparation stage, one becomes immersed in a problem or task that is challenging and triggers curiosity. The second stage, incubation, is characterized by the unconscious ripening of the subject. Information is processed in a random and associative way, allowing for the third stage, insight, to occur. This is the moment a new idea pops up, or the pieces of the puzzle fall together. In the fourth stage, the new idea or insight is evaluated to decide if it is worth pursuing. If the idea passes this stage, the fifth and final stage of elaboration starts. In this stage the idea is brought into being, created and fine-tuned. This last stage usually takes up the most time. Although early accounts of the stages of creativity thought of them in a linear way, it has become clear that the stages are recursive. During the elaboration stage a new insight might come up, which starts the loop again and again. In this iterative creative process, the state of flow can occur.

6.2.1.2 Applicability of Flow

In almost all interviews a state like flow was described by the artists and it became clear that the environmental circumstances they described as favorable for their artistic creativity were all circumstances that would facilitate getting into their flow. The exact preferred circumstances differed among the interviewed artists and seemed to be highly dependent on personal preference and personality. This would explain why attempts to ascertain the exact ‘formula’ of circumstances favorable to creativity have never succeeded: such formula simply does not exist as it differs per person. However, factors such as stimulus, rest and safety do appear to have a more generalizable character which serve the state of flow. Stimulus, rest and safety are created by a mix of environmental factors like social influences, resources, physical conditions etc. This implies a certain hierarchy in environmental factors that go from highly specific to each individual to more general for creativity. See the figure below for an illustration of this.

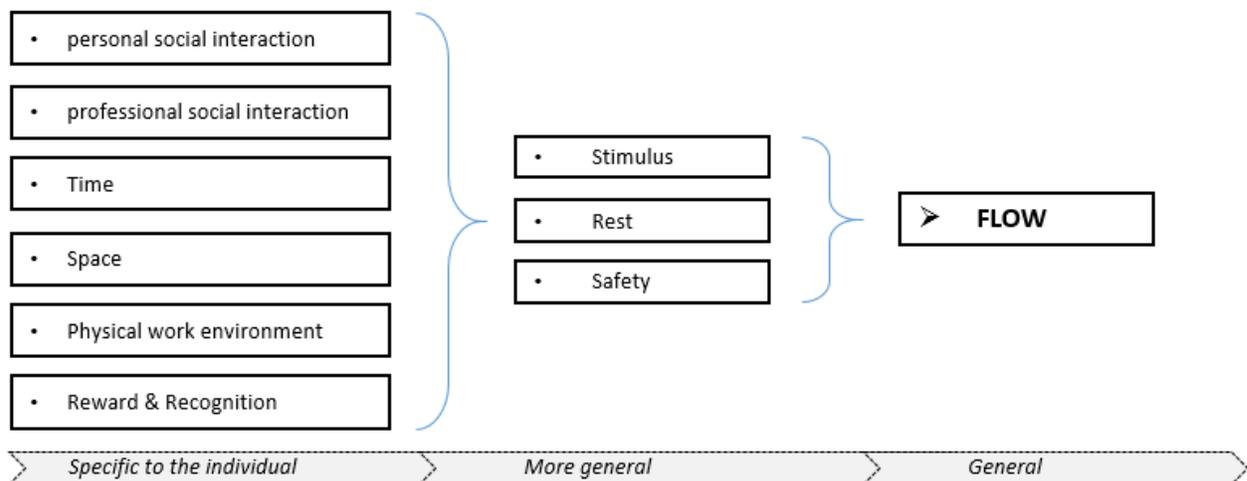


Figure 8: Hierarchy Environmental Factors towards Flow

The fact that the unique instances observed in the interviews show such a significant resemblance to Csikszentmihalyi's flow theory, forms a theoretical grounding for generalization of the findings.

6.2.2 The Inner Urgency to Create Art

The second theme that was clearly recurring was the artists' inner urge to create art. All of them stated that they would continue to be artistically creative if they would not receive recognition for it. Furthermore, in the interaction with peers or experts, they would not accept suggestions for altering their ways, as their way was driven by their urgency. Producing anything different than what felt as necessary would not lead to satisfaction of the urge. Csikszentmihalyi developed theory regarding this aspect as well.

6.2.2.1 *The Force of Creativity versus the Force of Entropy*

Csikszentmihalyi (1992, 1997, 2009) was interested in the intrinsic motivation of creative individuals. In a study which he conducted, he found that people consistently mention 'being creative', or 'discovering new things' as one of the top activities that brings them enjoyment. He theorized that this enjoyment of creativity must be the result of evolution, which has programmed humans to be inquisitive, risk taking and creating. He also argued that this inner drive to be creative is countered by the human primitive urge to unwind and relax: the force of entropy. In other words: the falling apart of the self instead of holding composure. According to Csikszentmihalyi this too is a survival mechanism to prevent humans from over-exerting themselves and instead preserving one's energy, health and strength. The two forces of entropy and creativity are in constant battle and should be switched on and off in turn at the right time.

6.2.2.2 *Applicability of Creativity versus Entropy*

The 'drive to create' as described by Csikszentmihalyi is very clear in artists. All interviewed artists said to make art because of a strong urge they feel, causing a certain inevitability. Respondents described in the interviews that when they refrain from being creative for too long, they get an 'itch.' A tension builds inside which has to be released at a certain point. Artist B said that if she hadn't been creative for a while and then started a project again, it was like finding oxygen and being able to breathe again (36:16).

The inner urgency artists describe goes beyond the need to be creative at just anything, but often pertains to a specific expression or artwork that 'needs to find its way out.' This is then closely related to

the fact that artists have reported to take little advice from others and have said that feedback – whether positive or negative – cannot detract them from producing what is driven by their urge. This forms an explanation for the different ways in which artistic creativity seems to respond to interactions with the field. The lower responsiveness to recognition and reward can also be clarified by the inner urge.

Another interesting aspect is that in Csikszentmihalyi's theory on creativity versus entropy, the concepts of flow and the inner urge come together. On the one hand, humans have the natural inclination to be exploring and creative. It appears in the case of the artists that this urge is rather strong. On the other hand there is the normal human propensity to wind down and let go of exertions whenever there is a chance. When going back to the analogy of pushing a heavy ball to get it to move, the state of entropy is where the ball lies still. There is always the inner desire to have it moving, but in order to actually accomplish this, the ball has to be pushed into movement which is often not an easy task. Artists have described the start of their creative process as truly dreadful: an absolute struggle with themselves. Adding external urgency – such as time pressure for a deadline – to the already existing internal urgency often made it easier to get the ball rolling. However, when no external incentive is present, the artist has to mobilize himself. A tension of urgency needs to build up until it is strong enough to overpower the urge for entropy. In those situations, the environment plays an important facilitating role as the preferred environment can help an artist 'access' this inner urgency easier to step into a state of flow.

Once the state of flow is reached, once the creative ball is rolling, the inner urgency is enough to drive the artist forward and the environment loses its significance. This indicates that the environment is only relevant at certain times in the creative process and is not a continuous factor. Apart from this observation, Csikszentmihalyi's theory provides a good complementary theory to explain the relationship between process and press. It has confirmed the possibility to ground the observed instances in established theory.

What is interesting about the inner urge of artists is that it relates not to just any kind of creativity, but to artisticity in particular. Many interviewed artists described how they had had this artistic propensity since their childhood and several of them thus indicated that they believed it was native to them (Artists C, D & E). This is an interesting finding for the domain generality versus specificity debate and especially to Amabile's Componential Model of Creativity as the artistic propensity may have to be considered as a separate component.

6.2.3 Comparison with Organizational Creativity

When trying to compare these underlying principles that drive responses to the environment between artistic and organizational creativity, certain limitations of this study become clear. As one side of the comparison – organizational creativity - is based on literature review, the data available is less rich than for artistic creativity for which data was empirically collected. This leads to the fact that comparison on a deeper level is difficult and bears the risk of drawing false conclusions. An attempt is made nonetheless, to make a comparison on a conceptual level, but should be interpreted by the reader as such: conceptual.

With regard to the pursuit of flow, it was found that most environmental factors were shaped by the artists to create a situation in which they could easily and comfortably reach a state of creative flow. However, when looking at the factors included by Amabile and Ekvall pertaining to organizational creativity, most of those factors are related to creating an environment that is accepting of and positive towards the occurrence of creativity and thus with the establishment of 'safety'. This seems to be a different focus than for artistic creativity. The 'unsafety' barrier needs to be neutralized for creativity to get a chance to even start to develop, whereas with creativity the opportunity for this start of creativity is already present and the focus is more on getting in the most productive mode. This raises the question whether the concept of 'flow' is essential in organizational creativity as well. The concept of flow is described by Csikszentmihalyi as a universal phenomenon and it is very well conceivable that a similar phenomenon exists in a work environment, yet the question is whether this flow revolves around productivity alone, or also around creativity. Further research into the occurrence of flow in relation to organizational creativity is needed to explore this. It would be an especially interesting topic to explore the possible differences in the occurrence of flow between situations where creativity is the core task (such as with artists) and where it is not (such as in many organizations). It is conceivable that in the latter situation, flow is less prevalent. This would imply that environmental influences revolve to lesser extent around the facilitation of flow. This might then also account for some of the differences in environmental influences observed in this study.

With regard to the second underlying principle, the inner urgency to create, this factor has actually been established by Amabile in 1996 in relation to organizational creativity under the name of 'pressure.' The factor 'pressure' referred to an individual having the sense that a task at hand is pressing, important and one wants to pursue it because one wants to achieve something. Although this describes a form of inner urgency or drive as well, it appears to be closely related to ambition: the wish to advance within the organization or to help the organization advance as a whole. This is a distinctly different 'drive' than the

one described by the interviewed artists, who referred specifically to a feeling of urgency to create artistically. At certain moments this drive could fall together with a drive for achievement, but this was not always the case. As was described before, almost all interviewed artists stated that they would continue to make art if their work did not receive any attention. Producing art to them appeared to be a way of life and in certain cases a way of personal expression in an artistic manner.

For both of the underlying principles it thus appears that differences with organizational creativity can be distinguished, albeit on a conceptual level. It does seem too confirm the earlier conclusion that based on the comparison between factors influencing artistic and organizational creativity, a meaningful distinction can be made between the two.

6.3 Propositions

The analysis of the empirical data as well as the process of grounding the findings in theory, has resulted in the formulation of several propositions:

- I) Based on the way artistic creativity and organizational creativity respond to environmental factors, a meaningful distinction can be made between them
- IIa) Artistic creativity uses environmental factors as facilitator to get from entropy to flow
- IIb) Influence of the environment is mostly relevant in the stage preceding flow
- IIIa) Artistic creativity is driven by the artist's inner urgency to create
- IIIb) The artist's inner urgency to create results in reduced susceptibility to interference
- IIIc) The artist's inner urgency pertains to artistic creativity specifically

7 Conclusions

After having analyzed the results from the interviews and after having grounded the findings in theory following an iterative hermeneutic process, now conclusions can be drawn that answer the research questions. This section will do so and then carry on by discussing theoretical implications that follow from the conclusions that go beyond the scope of the specific context of this study. After that practical implications will be discussed. The chapter concludes by pointing out several limitations of the study and by making recommendations for further research.

7.1 Answering the Research Question

The main research question of this study was as follows:

“How do artistic creativity and organizational creativity respond to environmental factors and to what extent does this provide basis for a meaningful distinction between them?”

The conducted interviews along with the theories studied have indicated that the environmental factors influencing organizational creativity and the factors influencing artistic creativity are significantly different. Although certain factors like the availability of time, are consistent, a variety of factors were found to be different, or evoked different responses or of a different magnitude.

For artistic creativity external reinforcement was found to be of much lesser relevance, while the physical work environment formed a more important factor than for organizational creativity. Time available to spend on the creative process was found to be relevant for both, but the two types of creativity displayed completely different interpretations of the factor autonomy. Overall, the factors contributing to a favorable environment for organizational creativity appeared to be focused on providing a safe environment in which employees ‘dared’ to express their ideas. For artistic creativity, favorable environmental conditions mainly revolved around making the artists feel good, comfortable, balanced and not-distracted, in order to help him reach the state of creative flow.

The two underlying principles that were found to be driving the way in which artistic creativity responds to environmental factors are the pursuit of flow and the inner urgency of artists to create art. These two principles are based on process related theories and thus extend beyond the initial scope of

this study. As the indication for a connection between press and process was so strong in the data, it was inevitable to include this aspect in the study. The theory used to ground the findings in were those by Csikszentmihalyi.

The principle of the inner urgency an artist experiences could be linked to Csikszentmihalyi's theory about the human propensity to be creative versus the primitive force which drives humans to a passive state in which they can unwind. Environmental factors can facilitate the transition from the passive state to the active state and can subsequently contribute to getting into a creative flow. The concept of flow is introduced by Csikszentmihalyi as well. It refers to the state of absolute focus, enjoyment and smooth progression in a creative process. This state is what is most desirable to reach, because once an artist gets into his flow, it becomes really difficult to distract him or bring him off of his path.

The fact that the concept of flow does not play a prominent role in the factors contributing to a creative climate – which much more revolve around the creation of safety - may suggest that this phenomenon is less prevailing in that context. In most organizations creativity occurs as a byproduct, rather than a core product, which may not lend itself for flow to the same extent. However, further research is necessary in order to make conclusive statements about this.

When taking these findings back to the domain specificity versus generality debate, it must be concluded that even though the types of creativity from the different domains display different responses to environmental factors, these differences cannot lead to a conclusive insight in domain specificity versus generality. A causal relation between behavior and domain has not been empirically tested in this study. However, the fact that artisticity appeared clearly as a separate construct next to creativity, would fit within the concept of a componential model of creativity and may provide new insight. Furthermore, as was stated earlier, mapping how potentially different types of creativity behave is a valuable addition to the academic body of knowledge as it has been done to limited extent only. It also may contribute to making the field of creativity a more tangible and less abstract field of study. Creativity is a commonly occurring phenomenon in daily life, yet it is highly abstract and philosophical in research. By studying actual behavior of the phenomenon, rather than trying to grasp its nature, the gap between the daily life and research may become a little smaller.

7.2 Theoretical Implications

When taking the findings from the empirical study out of the specific context of the research question and considering them from a meta-perspective, several implications of the study can be formulated regarding the existing creativity theories.

The first implication is that if the research results show such a high degree of intertwinement between press and process, the individual value of these constructs should be reevaluated, in particular that of press. The fact that the findings from the empirical study could be connected to Csikszentmihalyi's process-related theories, indicates an important connection between press and process. It might even be questioned whether press has much significance in this context if it would be completely disconnected from process. Each and every factor found to be influencing artistic creativity is connected to process in one way or the other. The construct of press thus seems to be only relevant to creativity to the extent that it can facilitate the creative process. This implies a hierarchical relationship, which may bring the field a step closer to conclusions on which approach of the four P's in creativity research comes closest to the essence of creativity. Further research would have to explore whether such hierarchical relationships exist with the other P's (Person and Product) as well.

In relation to this, a second theoretical implication can be formulated. The research as indicated that as soon as the environmental factors have facilitated an artist into a state of flow, the environmental factors become irrelevant. This indicates that the influence that the environment exerts has a temporal element: it is not static, but dynamic. Most research on press determined factors that have an enhancing or hindering effect on creativity. The current study now indicates that this effect is dependent on the point in time of the creative process. This puts many of the existing theories in a different light and may even have a consequence for theories used for sensitizing purposes by Amabile and Ekvall. Are they factors they determined applicable in eternity? Regardless of any development of creative process? Questions like this should be explored on a much broader scale. This could then eventually lead to the development of a dynamic approach of press rather than a static one.

Finally, the outcomes of this study seem to support the componential model of creativity, which includes both domain general and domain specific skills. Most artists described an associative thinking style as important to their creativity, this would then pertain to the domain general skillset. Apart from that, all artists possessed skills specifically pertaining to their discipline, such as technical painting skills or

the ability to play a musical instrument. However, the artistic propensity can neither be seen as domain general nor specific (at least not to specific domains as painting, composing, it could be seen as domain specific for the domain of art). Artisticity was referred to by the artists as something they had had since their childhood and could thus be part of the Person P of creativity research. This proposition could be further explored in future research as it may lead to a different view on the componential model.

7.3 Practical Implications

The findings from the study also have several practical implications. The exploration of environmental factors influencing artistic creativity can be beneficial to artists themselves as well as to the government.

On a micro level, the study outcomes may provide new insights to artists who may not have been aware of the broad range of factors that may potentially be of influence. By increasing awareness they can more actively pursue to surround themselves with favorable influences. An example could be the recognition that an external pressure might be necessary to complement to inner urge to create in order to get through the transition from entropy to flow more easily.

On a macro level, in times of cost cutting and the subsidy-system attenuating, it is useful for governmental bodies to be aware which environmental factors have the most impact on artistic creativity. The two factors that appeared to be highly relevant were time and space. Since subsidies are being cut and the social support for artists (WWIK) has been abolished, artists have to invest more time in generating income (possibly even outside the domain of art), which hits them hardest as it is one of the most crucial environmental factors for artistic creativity. The government could compensate for such fundamental measures by creating job opportunities for artists that fit with the criteria they can work by, meaning 2 or 3 days a week with reasonable security etc.

One last important practical implication that should be mentioned is with regard to the cross-over between domains. A common trend nowadays is the artist acting as consultant for an organization to advise them on how to be more creative. Many such entrepreneurial initiatives have developed in recent years (undoubtedly also as the result of artists having to generate income for themselves). For these ventures it is important to be aware to what extent the different types of creativity behave in similar or dissimilar ways. Differences in behavior do not imply that the domains would not be able to learn from one another, on the contrary, but awareness of such issues is crucial to be able to anticipate on responses and for mutual understanding and communication.

7.4 Limitations & Recommendations for Further Research

Although this study has attempted to pursue the highest possible level of academic rigor and to cover the broadest possible scope, limitations of the study and its outcomes are inevitable due to restrictions in time and resources. This section sets out to elaborate on the most important limitations of the study and to connect these with possibilities for further research. Furthermore, several research opportunities will be mentioned that do not stem from limitations in the study, but rather originating from generated findings that have led to new insights.

7.4.1 Limitations

The most important limitation of this study, was the fact that the data gathered on factors influencing organizational creativity out of literature review, was not nearly as rich as the data gathered on artistic creativity. As a result it was not possible to make an empirically substantiated comparison between the two types on the level of the underlying principles – only inferences on a conceptual level could be made. The necessity for richer data on organizational creativity did not become clear until the underlying principles in artistic creativity had been distinguished. Furthermore, time restrictions would not have allowed to continue with empirical study on organizational creativity to balance the richness in data between the two types of creativity. This thus forms an important recommendation for further research.

Other limitations are mostly connected to the exploration of factors influencing artistic creativity and the collection of the data. With regard to the respondents, a larger variety could have contributed to a broader understanding of relevant factors. Although several disciplines were represented, more respondents from disciplines other than visual arts would have been preferable. It must be emphasized that this limitation is not considered in the context of statistical relevance and the aspiration to form a representative sample; this is not the focus of interpretive research. However, a broader group of respondents could have resulted in a richer variety of factors found to be influencing artistic creativity. The same holds for variety in age. Although respondent ages varied between 27 and 67, this was not a conscious criterion for selection. Generational differences may provide interesting insights. Another dimension of diversity that was not explicitly included in the set of criteria for respondent selection, is the level of success of the artist in terms of public and professional recognition. For all of these dimensions of diversity, it could be said that further study of respondents with more diverse backgrounds could benefit the base of knowledge on contextual factors influencing artistic creativity.

One last limitation to be acknowledged is the fact that the gathered data is time- and culture-bound. Every respondent's cognitive mechanisms have been shaped by the influence of culture and time they live in. This is strongly related to the Interpretivists' stance on the situatedness of knowledge. The knowledge gathered through this study is thus situated in the Dutch culture and in the 21st century. Findings might have been completely different had the study been conducted in Japan or in the Netherlands but hundred years ago. Future research could focus on exploring whether respondents from different cultural backgrounds name different contextual influences on artistic creativity or respond to them in different ways. An interesting study could be to compare contextual influences mentioned by artists with cultural dimensions as formulated by Hofstede (1991). In order to study how influences on artistic creativity may change over time longitudinal studies are necessary. If the same type of study is conducted in one hundred years, the findings could be offset to the findings of the study conducted today. Going back in time, by means of historiometric research will be less feasible as it is unlikely that any rich data on the subject is available.

7.4.2 Further Research

Apart from several recommendations for further research following from limitations, also several ideas for future research have emerged from the findings of this study. The first such idea is the further exploration of differences between creativity as core product and creativity as byproduct in the occurrence of the found underlying principles of pursuit of flow and inner urge to create. Does flow occur and behave the same way when creativity is the core process, such as with artistic creativity? Perhaps in the distinction between different types of creativity the extent to which the creativity is a 'pure' form or less so, is more useful than a distinction based on domains.

Another interesting aspect to explore in further research is related to the theoretical implications. The notion of a hierarchy between the P's could be the starting point of further studies. It would be interesting to generate knowledge on whether hierarchical relations might exist between other P's as well. Also the notion of the hierarchy could be tested in a Positivist manner to strengthen the argument. The suggestion that the 'Press' factors should be considered a dynamic model, rather than a static model can also be followed up on.

All in all, it can be concluded that this study has led to many new questions, which implies many opportunities for new studies to contribute to the general body of knowledge on creativity.

7.5 Reflections

After having conducted this interpretive study, a final section is deemed appropriate for the purposes of reflection. The subjective role of the researcher is acknowledged and even thought inevitable in interpretive studies, but proper evaluation is necessary in order to ensure transparency. The seven principles formulated by Klein and Myers (1999) are used here as guideline for reflection:

- **The Fundamental Principle of the Hermeneutic Circle**

The iterative hermeneutic process has been used throughout the entire study. It was used in the continuous evaluation of responses in the interview to adjust the interview protocol on the go, in the data analysis as part of the associative approach, in the meta-analysis when linking back findings to theories and simply in every small step of the way in shaping the entire study. The process of temporarily 'zooming out' to reflect upon the larger context became engrained in the entire working method.

- **The Principle of Contextualization**

The situatedness of knowledge is acknowledged and reflected upon in the limitations section of the study. Factors like the culture and time in which the study is situated are recognized as being highly important in the way the data was shaped.

- **The Principle of Interaction Between the Researchers and the Subjects**

In the data gathering phase, interaction between the researcher and the respondents inherently influenced the content of the data that was gathered. The researcher has made an effort to pose questions in a clear, yet open manner. Each question was then followed by an iterative process of mutual clarification. At certain points in time clarifying questions were asked by the respondents and at other points in time were asked by the researcher. The data can therefore be seen as the result of the interplay between different sense-making mechanisms of the involved individuals.

- **The Principle of Abstraction and Generalization**

Theoretical abstraction was done in the meta-analysis phase. Here the underlying principles that had been found to drive responses to contextual factors were grounded in theories that pertained to a different aspect of creativity research, namely the creative process. The theories used for abstraction purposes matched well with the data and provided an interesting insight in the connection between the creative process and press.

- **The Principle of Dialogical Reasoning**

This principle calls for a constant dialogue between the researcher's preconceptions, the theories used for sensitizing purposes and the data being gathered. It is important to reflect on the way these matters impact the sense-making mechanisms of the researcher. An example of the influence of the researcher's individual sense-making mechanisms, is the fact that the researcher recognized many of the phenomena described by the interviewed artists as also being applicable to the process of writing a research report. This resulted from the sense-making technique of matching new information to previously known patterns or concepts which could have been different for any other researcher. Furthermore, the fact that the researcher had been previously engaged in creativity research (Hattinga Verschure, 2012), to a large extent already shaped the theories that were used for sensitizing purposes. In fact, the 'sensitizing' had partly already occurred during the previous study. Throughout the study, the researcher attempted to be aware of the fact that previous conceptions could lead to having a narrow mind in data gathering and analysis. In the end, the cross-over from the 'press' strand of creativity research to the 'process' strand, resulted from a process of dialogical reasoning.

- **The Principle of Multiple Interpretations**

The influence of the principle of multiple interpretations is twofold in this study. First of all, the fact that different respondents have different viewpoints on certain matters is exactly what this study aimed to explore. The aim of the study was to map any-and-all factors that could influence artistic creativity and in this regard, multiple interpretations were an asset. These were processed in the data analysis chapter and whenever possible different viewpoints were elicited. Second of all, the fact that further diversification of the respondents could have led to greater variety – and possibly increased completeness – of the factors found, was acknowledged in the recommendations for further research. It is recommended that further studies are conducted that focus on respondents with diverse characteristics to ensure full benefit from the respondents' multiple interpretations.

- **The Principle of Suspicion**

This principle has not been consciously addressed in this study. It pertains the possibility of false consciousness of respondents, which could be of influence to this study considering the fact that the self-perceived creativity of the interviewed artists was central to the study. However, one of the selection criteria for the respondents was that they received recognition from their field. This was thought to provide enough warranty that creative performance was *actual* creative performance.

8 References

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8.2 Respondents

Interviews were conducted with the following respondents. Audio recordings and elaborate minutes of the interviews are archived by the researcher and can be reviewed upon request. Contact JHattingaVerschure@student.eur.nl.

	Discipline	Place	Date	Duration
Artist A	Singer / Songwriting	Raamsdonk	20-05-2013	56 min.
Artist B	Drawing	Tilburg	21-05-2012	64 min.
Artist C	Drawing	Tilburg	21-05-2013	74 min.
Artist D	Kinetic	Tilburg	22-05-2013	88 min.
Artist E	Choreography	Tilburg	22-05-2013	78 min.
Artist F	Drawing / Painting / Sculpting	Amsterdam	23-05-2013	95 min.
Artist G	Kinetic / Performance Art	Tilburg	27-05-2013	51 min.
Artist H	Poet	Skype	28-05-2013	45 min.
Artist I	Drawing	Amsterdam	30-05-2013	60 min.

9 Appendices

9.1 Appendix 1: Klein & Myers' Seven Principles of Interpretive Field Research

Based on Klein H.K. & M.D. Myers (1999) 'A set of principles for conducting and evaluating interpretive field studies in information systems' MIS Quarterly, Vol. 23, no. 1, pp67-94 as discussed in Hattinga Verschure, J.B. (2013) 'Shared Service Center Design: A study into decision drivers and how they change over time,'

The Fundamental Principle of the Hermeneutic Circle

The first principle that Klein & Myers determined is also what they call the most fundamental principle. It can be considered a meta-principle that guides the approach of the other six principles. The hermeneutic circle refers to the iterative process of interpreting the interdependence of individual parts and the whole they are part of.

Gadamer (1976a) gave an apt example to illustrate the principle. When interpreting the sentence 'They are playing football', we need to come to an understanding of the sentence as a whole in its context in order to come to a meaningful conclusion. The process starts with an initial interpretation of the individual parts: what does this football look like? But in order to answer this question, one must consider the whole sentence and its context. If the sentence is placed, for example, in an office environment where no physical activity is actually taking place, the sentence might be a metaphor. With this understanding, one can interpret the individual parts differently, where football can, for instance, refer to a strategic game. To find out what the real life content of the game could be, one must then zoom out again and study the whole in its context. In hermeneutics, this iterative process is thought to be the foundation of human understanding: moving between preconceptions about the meaning of parts and the way they interrelate.

The principle of the hermeneutic circle can be applied to several aspects of research. It is useful to use with the principles of contextualization and interaction as described below.

The Principle of Contextualization

Interpretive researchers reason that organizations are not static, but rather structures that foster constantly changing relationships between people, organizations, and technology. In line with Parmenides' statement that 'one can never swim in the same river twice', interpretivists believe that observations in field studies are those of a moving target which is the result of its historical and cultural context. Klein and Myers therefore point out that one of the key tasks of interpretive researchers is to find meaning in context.

Gadamer (1976b) reasoned that by definition, a writer and a reader of a text cannot have the same understanding of it because of the historical distance between them. When applying this to the setting of field research, this implies that a researcher can never have the same understanding of a research subject as the meaning it had when it first emerged, as over time it has evolved under the influence of its historical and cultural contexts. Rather than trying to cover for these differences in understanding, they should be explicitly addressed and reflected upon. In other words, the research should elaborate on how a person's history and culture have contributed to the status quo.

The Principle of Interaction Between the Researchers and the Subjects

Not only should interpretivist researchers derive meaning from context, they should also take into consideration the influence of the interaction between the researcher and the research subject. Klein and Myers indicate that both the researcher and the participants are interpreters and analysts. Participants have to interpret and appropriate the concepts discussed in interaction with the researcher which influences his responses. His actions might also be influenced by his understanding of the research, which can be something the researcher will have to reflect upon.

Furthermore, the researcher's own sense-making mechanisms shape his preconceptions of the research subject and the participants, which can affect the organization, documentation and interpretation of the research material. The idea that interpretations of observations are always colored by the individual sense-making mechanisms of the researcher has great focus in interpretivism, as was discussed before. This is an issue that should also be addressed. Klein and Myers state that researchers can do so by engaging in self-reflection, the questioning of preconceptions and assumptions and the conscious reflection on emotional and intellectual responses to observations.

The Principle of Abstraction and Generalization

Although interpretivism emphasizes that knowledge is situation-dependent and that research should therefore focus on the understanding of context, this does not imply that interpretivism only strives for ideography. On the contrary, in interpretivism there is in fact a 'philosophical basis for abstraction and generalization' (Klein & Myers, 1999). According to Klein and Myers, it is intrinsic to interpretive research to strive to relate particular observations to very abstract theories: "unique instances can be related to ideas and concepts that apply to multiple situations" (p75). Embodied in this objective is the iterative process of the hermeneutic circle, where the small parts of the particular instances are being related back to the whole of abstract theories in order to establish understanding.

Based on this theory of abstraction, Walsham (1993) proposed that the validity of research findings in interpretive research does not stem from statistical representativeness, but rather from a solid, plausible, and logical reasoning in the description of results. Walsham moreover defined four types of generalizations that can follow from interpretive research, being:

- The development of concepts
- The generation of theory
- The drawing of specific implications
- The contribution of rich insight

In this light, theory plays a crucial role in interpretive research, but in a different way than for positivist research. Whereas positivist research is often deductive, where it starts with the general theory and tests its implications in the particular, interpretivist research is more often inductive, where it observes the particular and tries to relate it back to general theories. Furthermore, interpretivists use theory as 'sensitizing' instruments to shape their preconceptions.

The Principle of Dialogical Reasoning

The next principle addressed by Klein and Myers is the principle of dialogical reasoning. This principle established that researchers should hold a critical attitude towards the sensitizing theories they have used to shape their preconceptions. If it becomes apparent in the course of the research process that the gathered data does not support the initial research lenses, these might have to be reconsidered. The process of dialogical reasoning in this way acknowledges the fact that prejudice or preconception will have

to be overcome in order to achieve a full understanding of the research subject, yet it also illustrates that prejudice and preconception are the starting point of our understanding. This is in stark contrast to the positivist view, where a researcher is expected to be objective and any kind of prejudice or bias is considered to be interfering with knowledge generation.

The Principle of Multiple Interpretations

While the principle of dialogical reasoning is aimed at consciously and critically assessing one's own preconceptions, the principle of multiple interpretations refers to the critical confrontation of possible conflicting interpretations of participants. As different participants might have different understandings because of the influence of social context, it is the responsibility of the interpretivist researcher to identify these multiple viewpoints as well as what caused them. Klein and Myers mention conflicts related to power, economics or values, as possible causes of differences in viewpoints. Interpreting these multiple viewpoints can contribute to a more complete understanding of the research subject. Klein and Myers note that the existence of multiple viewpoints is not always the case and it can therefore not be considered a hard requirement. Regardless of whether the multiple interpretations are present or not, the principle is of heuristic value as it elicits probing during the interviews to stir beneath the surface.

The Principle of Suspicion

The final principle described by Klein and Myers is a slightly contested one, as its origins lie with critical theory and not all interpretivists agree to its relevance. The principle of suspicion addresses the possibility of false consciousness of participants caused by socially created distortions. Deetz (1996) states that the principle of suspicion has the goal to "demonstrate and critique forms of domination, asymmetry, and distorted communication by showing how social constructions of reality can favor certain interests and alternative constructions can be obscured and misrecognized." (p202)

Klein and Myers note that in order to identify false consciousness or false preconceptions the researcher will have to go beyond an understanding of the data to a level of understanding the underlying social world, which consists of power structures, potentially conflicting interests, etc.

9.2 Appendix 2: Interview Protocol Artistic Creativity

General

- Is producing art your full-time occupation?
- What kind of art do you create and in which context (autonomous, commissioned etc.)?
- Can you describe what kind of environment is required for you to be creative?

Social Influences

- In which way do the following social circles affect your ability to perform creatively?
 - Private / Family
 - Peers / Professional
 - Societal
- Are these influences different in varying stages of the creative process?
- Are these influences different for different kinds of art produced? (Autonomous vs. commissioned?)

[NOTE: probe for positive versus negative influences. Influences related to encouragement, reward, criticism, support, affirmation etc.]

Resources

- In which way do the following resources affect your ability to perform creatively?
 - Time
 - Practical (money, materials etc., work space)
- Are these influences different in varying stages of the creative process?
- Are these influences different for different kinds of art produced? (Autonomous vs. commissioned?)

Physical Work Environment

- To what extent do physical aspects of your work environment affect creativity?
- Which aspects influence your creativity?
- Are these influences different in varying stages of the creative process?
- Are these influences different for different kinds of art produced? (Autonomous vs. commissioned?)

Reward

- In which way do the following reward-related factors influence your ability to perform creatively?
 - Recognition (from media, peers, etc.)
 - Remuneration
 - Subsidies
 - Awards

Other

- Are there any other factors or categories of factors that might be important for the creative environment with regards to artistic creativity?
- To what extent do you think artistic creativity differs from organizational creativity?

9.3 Appendix 3: The ten factors from Ekvall's CCQ

The ten factors of the CCQ as described by Ekvall (1996) in 'Organizational climate for creativity and innovation.' *European Journal of Work and Organizational Psychology*, 5(1), p107-108:

“Challenge. The emotional involvement of the members of the organization in its operations and goals. A high-challenge climate is seen when the people are experiencing joy and meaningfulness in their job, and, therefore, they invest much energy. Low challenge means feelings of alienation and indifference; the common sentiment and attitude is apathy and lack of interest for the job and the organization.

Freedom. The independence in behaviour exerted by the people in the organization. In a climate with much of this kind of freedom people make contacts and give and receive information; discuss problems and alternatives; plan and take initiatives of different kinds; and make decisions. The opposite climate would include people who are passive, rule-bound and anxious to stay inside established boundaries.

Idea Support. The ways new ideas are treated. In a supportive climate, ideas and suggestions are received in an attentive and supportive way by bosses and workmates. People listen to each other and encourage initiatives. Possibilities for trying out new ideas are created. The atmosphere is constructive and positive. When idea support is low, the reflexive “no” prevails. Every suggestion is immediately refuted by a counter-argument. Fault finding and obstacle raising are the usual styles of responding to ideas.

Trust/Openness. The emotional safety in relationships. When there is a strong level of trust, everyone in the organization dares to put forward ideas and opinions. Initiatives can be taken without fear of reprisal and ridicule in case of failure. Communication is open and straightforward. Where trust is missing, people are suspicious of each other and are wary of making expensive mistakes. They also are afraid of being exploited and robbed of their good ideas.

Dynamism/Liveliness. The eventfulness of life in the organization. In the highly dynamic situation, new things are happening all the time and alterations between ways of thinking about and handling issues often occur. There is a kind of psychological turbulence which is described by people in those organizations as “full speed”, “go”, “breakneck”, “maelstrom”, and the like. The opposite situation could be compared to a slow jog-trot with no surprises. There are no new projects; no different plans. Everything goes its usual way.

Playfulness/Humour. The spontaneity and ease that is displayed. A relaxed atmosphere with jokes and laughter characterizes the organization which is high in this dimension. The opposite climate is characterized by gravity and seriousness. The atmosphere is stiff, gloomy, and cumbersome. Jokes and laughter are regarded as improper.

Debates. The occurrence of encounters and clashes between viewpoints, ideas, and differing experiences and knowledge. In the debating organization many voices are heard and people are keen on putting forward their ideas. Where debates are missing, people follow authoritarian patterns without questioning.

Conflicts. The presence of personal and emotional tensions (in contrast to conflicts between ideas) in the organization. When the level of conflict is high, groups and single individuals dislike each other and the climate can be characterized by “warfare”. Plots and traps are usual elements in the life of the organization. There is gossip and slander. In the opposite case, people behave in a more mature manner; they have psychological insight and control of impulses.

Risk Taking. The tolerance of uncertainty in the organization. In the high risk-taking case, decisions and actions are prompt and rapid, arising opportunities are taken and concrete experimentation is preferred to detailed investigation and analysis. In a risk-avoiding climate there is a cautious, hesitant mentality. People try to be on the “safe side”. They decide “to sleep on the matter”. They set up committees and they cover themselves in many ways before making a decision.

Idea Time. The amount of time people can use (and do use) for elaborating new ideas. In the high idea-time situation, possibilities exist to discuss and test impulses and fresh suggestions that are not planned or included in the task assignment; and people tend to use these possibilities. In the reverse case, every minute is booked and specified. The time pressure makes thinking outside the instructions and planned routines impossible.”