

Aalborg University  
Department of Business  
and Management

Master's Thesis

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**Rethinking Interorganizational  
Collaboration: The Impact of  
Prejudice on Group Creativity in  
Ideation**

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## Executive Summary

In a market environment that is characterized by accelerating change, organizations permanently need to develop innovations in order to grow or even to just survive. The capability to innovate is closely linked to creativity which can be seen as a prerequisite to innovation. Based on, that creative and innovative ideas emerge from combining existing knowledge in new ways, organizations increasingly use work groups for extending the combination possibilities. Moreover, they do not solely rely on their internal resources, but also on external ones by establishing collaborations with other organizations. This allows access to knowledge that otherwise would not be available to the firm and increases the work group's creative potential. In order to create value for the organizations, the collaboration participants need to exchange their unique knowledge before it can be combined in a novel and useful way. It is for this reason that the effectiveness of exchange processes and the related group ideation processes is of immense importance for the success of a collaboration project. These processes require the work group members to break old thinking patterns and think creatively. Thus, organizational success, inter alia, depends on group creativity which is also termed creative collaboration. Existing literature especially emphasizes the importance of cultural, organizational, and environmental factors in relation to a group's creative performance, while neglecting the great significance that group processes have for group creativity. It is for this reason that this master's thesis partly fills this gap by focussing on group processes in relation to the concept of prejudice. It is assumed that interorganizational collaborations are accompanied by prejudices, and that these pose an obstacle to the group's creative performance. Different intergroup relation theories are presented, analysed, and their contents are transferred to the interorganizational context. The social identity theory is of particular relevance. Based on the social categorization process, it is explained that an individual that identifies with its own organization starts to differentiate between those people that also belong to this organization and those that do not. The former constitutes the members of an individual's ingroup while the latter refers to members of the so called outgroup. It is argued that the mere distinction between ingroup and outgroup results in a prejudiced attitude towards those collaboration participants that do not belong to one's own organization. This negative attitude towards outgroup members is reinforced by the perception of competition, relative deprivation, or relative gratification. Moreover, prejudice is often accompanied by intergroup anxiety which results in several negative implications for the intergroup collaboration. It is shown that prejudices negatively impact the idea generation process in groups by resulting, firstly, in less identification with the work group as a whole, secondly, in ingroup-favouritism, thirdly, in a divided focus, and fourthly, in intergroup anxiety. All this leads to process losses which means that the group's existing creative potential cannot be fully realized. Based on these theoretical insights into the development of prejudices in interorganizational collaborations and their impact on group ideation, different measures are presented that aim at reducing these negative effects on the group's creativity. Thus, besides the provision of theoretical knowledge, the thesis also includes practical implications for facilitating an effective idea generation process which enables the group to fully make use of its creative potential. Moreover, the thesis also illustrates the generally contrary nature of creativity and prejudice, which indicates that creativity not only is valuable in the organizational context but also with regard to the society as a whole.

In sum, this thesis contributes to the existing literature by demonstrating through a theoretical analysis that prejudices arise in interorganizational collaboration projects, and by

illustrating the dramatic negative effects that these prejudices have on group creativity in the ideation process. Moreover, information about potential practical measures for circumventing these negative effects is provided. Furthermore, the results do not solely apply to the interorganizational context, but generally to all creative collaborations with participants from different 'social groups' (e.g., intraorganizational innovation projects that include people from different departments). Finally, through illustrating the contrary nature of prejudice and creativity, and thus, the social value of creativity, politicians are encouraged to consider the integration of creativity enhancing measures into state educational services.

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## 1. Introduction

The global market is characterized by dynamic and continuous change. Organizations are required to permanently adapt to these changes or even initiate them in order to survive and grow. Therefore, they are urged to maintain and improve their innovation capability in order to provide the market with new products and services, or improve internal processes and procedures to positively impact their overall performance. Thus, organizations strive for innovation. Due to the fact that creativity and innovation are closely linked phenomena, the interest in creativity is also growing. Creativity is necessary for the generation of novel and valuable ideas, and hence, for the development of innovations (Mumford, Hester and Robledo 2012). This generation requires a process that allows for combining existing knowledge, skills, and resources in new ways (e.g., Amabile and Pratt 2016; Cropley and Cropley 2010). In order to increase the number of possibilities for these combinations, diverse resources are desired. It is for this reason that group creativity, or creative collaboration, received more and more attention throughout the past years. Additionally, in order to increase the diversity of the existing knowledge, skills, and resources within a creative work group, cross-organizational collaborations are established. They aim at the exploitation of the higher creative potential that these groups possess compared to organizationally internal groups or individuals. However, there is plenty of evidence that working in groups rather impedes creative performance instead of enhancing it, and thus, results in process losses that prevent the full exploitation of the group's creative potential (e.g., Paulus and Yang 2000; Reiter-Palmon, Wigert and de Vreede 2012). It should therefore be the endeavour of an organization to increase the effectiveness of the work group's performance in order to achieve maximum success of the creative collaboration. However, this poses a major challenge to organizations, due to the fact that group creativity is a complex phenomenon that is influenced by various cognitive, motivational, contextual, and environmental factors.

In this thesis, it is assumed that collaboration participants' prejudices towards members that do not belong to their own organization are one of those factors that impacts the creative performance of the work group. Based on this assumption, it is theoretically analysed, how prejudices arise in interorganizational collaborations, and how they impact group creativity in the idea generation process. Finally, practical measures are presented that can be taken to reduce the effect of prejudices on ideation and group creativity in order to fully exploit the group's creative potential.

The master's thesis is structured as follows. The next section gives a more detailed explanation about the problem that is analysed and lists the three research questions of this work. This is followed by the methodology chapter. Thereafter, the literature review is presented in the fourth chapter. It provides a comprehensive overview about the three main topics that underlie this thesis, namely, creativity, and especially group creativity, prejudices, and interorganizational collaborations. Special emphasis is put on the topic of creativity in order to illustrate its importance for organizations and the society as a whole. The fifth chapter explains the difference between stereotype activation and stereotype application for the purpose of developing an understanding about that stereotypes are not tantamount to prejudices. This is followed by the sixth chapter, which is concerned with the connection between interorganizational collaboration and prejudice. It includes the main theories with regard to intergroup relations and transfers their contents to the interorganizational context. Based on this transfer, several propositions are developed with regard to how prejudices arise in interorganizational collaborations. Assuming that these propositions prove to be true, chapter seven presents the consequences that these prejudice have for group creativity in the

ideation process. It concludes with a section that illustrates the contrary nature of prejudice and creativity. Thereafter, the eighth chapter, which is based on the previous one, explains and lists different potential methods for reducing the negative effects of prejudices on creativity in the ideation process in order to enhance creativity, and thus, fully exploit the creative potential of the collaboration group. The subsequent ninth chapter includes a discussion and theoretical and practical implications. Finally, the master's thesis ends with a conclusion in the tenth chapter.

## 2. Problem Formulation

Creativity is a multifaceted phenomenon that increasingly gained in popularity during the past years, which was due to its close connection to innovation. Creativity can be seen as a prerequisite to innovation; it is the generation and development of ideas before they get implemented. Based on this, organizations that strive for innovation in order to survive and grow in a dynamic and continuously changing market environment should also strive for creativity (cf., Mumford, Hester and Robledo 2012).

Existing and accessible resources, knowledge, and skills form the basis for creativity and innovation. Combining these in a new way will finally lead to novel and in the optimum also useful products, services, procedures, or processes (Amabile and Pratt 2016; Cropley and Cropley 2010). Based on the fact that several individuals possess more mental resources than on single individual, and thus increase the possibilities for new combinations, group creativity, or creative collaborations, received greater attention. Moreover, it is suggested that enterprises should also gain access to different kinds of resources that can be found beyond their organizational boundaries, rather than exclusively relying on their internal resources (Tidd and Bessant 2009). Therefore, organizations increasingly execute innovation projects in collaboration with other organizations. These interorganizational collaborations allow the potential access to even more diverse knowledge that can be combined in new ways. However, when collaboration participants from different organizations are brought together, different obstacles with regard to the information and knowledge exchange processes arise (Paulus and Nijstad 2003). Due to this, a vast literature is concerned with the challenges that are accompanied by interorganizational collaborations. And even though many studies conclude with the provision of some guidance for cross-organizational projects, by, inter alia, suggesting to build up trust among the participants, and establish a positive group climate (e.g., Andersen, Kragh and Lettl 2012; Najafian and Colabi 2014; Gu, et al. 2016), they do not address the origin of these necessities, and neglect the importance of group processes with regard to creative collaboration (Paulus and Nijstad 2003). It is for this reason, that this master's thesis is concerned with exactly these origins, by rethinking and scrutinising current results of interorganizational collaboration research.

As the thesis reveals throughout its course, different cognitive and psychological processes play a key role with regard to the arising challenges. Since it was assumed from the beginning of this thesis that obstacles to effective collaboration in interorganizational teams arise through prejudiced attitudes towards group members that belong to other organizations, one part of the thesis is concerned with the reason for why these prejudices arise. This results in the first of three research questions.

- (1) How do prejudices arise in interorganizational collaboration projects?

Based on the assumption that prejudices are existent during the collaboration, another thesis part is dedicated to the consequences that these prejudices have for the work process of collaboration groups. Thereby, emphasis is put on the effect on group creativity (due to its connection to innovation), or more concrete, the idea generation process, since this process can be assumed to form this part of the creative process that calls for the highest degree of creativity. This results in the following research question.

- (2) How do these prejudices impact group creativity in ideation processes?

Finally, in order to not only provide the reader with knowledge about how prejudice arise and what impact they have on interorganizational creative collaboration, the last part of this thesis is concerned with methods for reducing the effect of prejudices. Due to the fact that answers to the previous question reveal that these effects are negative, the third research question is the following.

- (3) What are potential methods to avoid the negative effect of prejudices on group creativity in the ideation process?

In sum, this master's thesis is valuable in this sense that it, firstly, provides a new way of thinking about the challenges that are accompanied by interorganizational collaborations and how these challenges arise, by integrating the concept of prejudice; secondly, it explains in detail what consequences prejudices have on group creativity and even illustrates the contrary nature of creativity and prejudice; thirdly, it makes the connection to the real world by providing practical methods that can reduce the impact of prejudices on the ideation process; and finally, it discusses the implications of the findings and encourages new ways of thinking with regard to the connection between prejudice and creativity.

### 3. Methodology

The methodology has the purpose of providing the reader, firstly, with information about how the idea for the project was generated and how the project is structured for answering the research questions, secondly, with knowledge about the author's general assumptions about reality and the nature of knowledge in order to enable the reader to control for the project's consistency, and thirdly, with clarifications about which kinds of data were collected, where and how they were collected, and also how they were used in the project for answering the research question (Kuada 2012).

#### 3.1. Idea and Overview

The idea for the topic of the thesis has its origin in the author's participation in the 'Creative Genius Semester' at Aalborg University. Throughout this course the author developed an increasing interest in the topic of creativity, which is why she wanted to integrate it in her master thesis. A first overview about the literature in relation to creativity in the organizational context clearly showed that this area generally was anything else than understudied. Through reading different publications in relation to organizational creativity the author tried to identify some gaps within the existing literature that could serve as basis for finding a relevant research topic that seems appropriate in relation to her limitations with regard to time and material resources. By continuously making notes about potential topics, the author came up with four research areas. She finally chose that one, she was personally most interested in. Due to the fact that the chosen topic still seemed to be too broad, she aimed at narrowing the topic further down. After being engaged in the topic-finding process for four weeks, the author finally decided to focus on the impact of prejudice on the idea generation process in interorganizational collaborations.

Even though it was desired to write the thesis in collaboration with one or several companies by conducting interviews and partly observing the participants of the interorganizational collaboration during their first idea generation process, it was not possible to establish such a collaboration, due to the fact that the requirements concerning access to the necessary data (i.e., having established an interorganizational collaboration that just started and that still requires the execution of the first idea generation process) could not be fulfilled by any of the contacted companies. This led to the decision to exclusively base the thesis on available literature, and thus, on secondary data.

On the basis of this data, the three research questions should be answered and result in new insights with regard to the interrelations between interorganizational collaboration projects, prejudice and group creativity. As mentioned in chapter 2, the three research questions are:

- (1) How do prejudices arise in interorganizational collaboration projects?
- (2) How do these prejudices impact group creativity in ideation processes?
- (3) What are potential methods to avoid the negative effects of prejudice on group creativity in the ideation process?

The thesis starts with a comprehensive literature review, with regard to creativity, prejudice, and interorganizational collaboration in order to provide the reader with an overview about the current assumptions, theories, and concepts of these three main topics. Furthermore, the

literature review serves the purpose of enabling the reader to build up a knowledge base with regard to the three main topics in order to bring the reader closer to the perspectives of the thesis author, and therefore facilitate a common understanding of the respective areas that are analysed. The literature review is followed by a chapter that aims at providing the reader with the necessary theoretical knowledge to understand what cognitive and motivational processes lead to the development of prejudice. The subsequent chapter discusses different theories with regard to intergroup relations and how prejudiced attitudes arise in intergroup interactions. These general theories are transferred to the organizational context and are used to develop different propositions with regard to how prejudice between members belonging to different organizations arise in interorganizational projects. Due to the fact that this thesis is exclusively based on theory, it can be seen as the first part of a deductive research approach. This means that theories are used to make propositions, but that these propositions still need to be empirically tested (cf. Trochim 2006). Despite the missing empirical evidence that these propositions prove to be true in practice, the following chapters are based on the assumption that they are. It is in detail explained what consequences prejudices in cross-organizational projects have on both group processes and group creativity in ideation processes. These consequences derived from an in-depth analysis of the different cognitive and motivational processes that are required for creativity and prejudice. It was finally the comparison of these processes that led to the conclusion that the concepts of creativity and prejudice generally can be said to be contradictory in nature. Finally, due to the enormously negative implications of prejudice on group creativity in ideation processes in interorganizational collaborations, the subsequent chapter provides the reader with practical methods on how to circumvent these negative effects. These practical recommendations have their origin in theories about, and methods for reducing prejudice, as well as in theories about, and methods for enhancing group creativity. The subsequent penultimate chapter reflects on all the previous chapters by discussing the generated results and making implications for both theory and practice. Based on this, the concluding chapter includes the essential findings of the thesis and provides an answer to the three research questions.

### 3.2. Assumptions

All research is interpretive, and interpretations of situations affect the entire research from the very beginning to the final project completion (Gummesson 2003). It is therefore that the reader should be aware of the author's basic assumptions about the world in order to understand why data were collected and what the author's approach was to understand the meaning of these data. This requires an explanation of both the ontology and the epistemology. The former refers to assumptions that the author makes about the relationships between human beings and their environment, which in turn defines how the author perceives reality. Based on these perceptions, the reader can understand what is perceived as true for the author, and thus, where knowledge needs to come from in order to help to find this truth. This leads to the epistemological choice of the author. It describes how the author perceives the nature of knowledge, and thus explains where the knowledge one possesses derives from. It describes where and how one should gain information from in order to obtain new knowledge. The two basic distinctions in epistemology are between the external and the internal observer of the social world. This means that some argue that knowledge of the social world arises through external observation of the world, while others argue that knowledge about the social world derives through being part of that social world. The decision about what ontological and epistemological perspectives one uses can be based

on different factors (Kuada 2012). In this thesis, the situationalists approach is used for this decision. This means that the different perspectives on reality and knowledge should not mutually exclude each other, but rather should supplement each other. One should be aware of that reality is created from different perspectives, and therefore it is not sufficient to rely on only one interpretation method (Rossman and Wilson 1985).

Based on the situationalists approach, the author's perspectives on reality can rather be described as being both subjective and objective. This leads to an assumption about reality which includes, on the one hand, that the social world is external to its individuals, and, on the other hand, that it is individuals that interact with each other that construct reality. It is therefore that the appropriate way to obtain knowledge is both through external and internal observation of the social world. Based on this, the research can be said to apply two of the methodological approaches developed by Abnor and Bjerke (2009), namely the systems approach and the actors approach. The systems approach argues for that the social world is constituted by a system that contains various interrelated elements and is characterized by both stable structures and regular, but still dynamic, and non-regular processes. The actors approach, in turn, refers to a social world that is highly dependent on the interactions between individuals and the meaning they give to these interactions. This means that reality and truth are collectively created and that they can change over time (Abnor and Bjerke 2009). Combining these two approaches, reality is perceived as including various social systems whose elements and their relations are created through the interaction of individuals. Thus, knowledge is contextual and depends on various factors that characterize the respective situation one considers. This implies that the secondary data that is used for this thesis must always be seen in its context and from the perspective of their authors in order to receive the right meaning of the analysed documents and understand reality.

### 3.3. Data Collection and Data Use

As previously mentioned, the research is exclusively based on secondary data, by making use of available literature with regard to the three different research topics under investigation. The literature research was mainly conducted by using the library of Aalborg University and by using google scholar. This decision was based on financial resource limitations, since documents accessed via the library are freely accessible for students, which is also partly true for information from google scholar. However, more specific information was also searched through identifying relevant journals for the respective topic and making use of the search function on the web pages of these journals to finally receive suggestions for potentially relevant articles.

Data was collected with regard to the three main topics, creativity, interorganizational collaboration, and prejudice. It was tried to consider these topics both in isolation and in relation to each other. The relationship between creativity and interorganizational collaboration could be explained by including the concept on innovation. Simply put, most interorganizational projects aim at the creation of innovation. Creativity leads to innovation. It is therefore that cross-organizational collaborations should strive for creativity in order to receive innovative outcome. An illustration of this relationship can be found below in *Figure 3.3*.

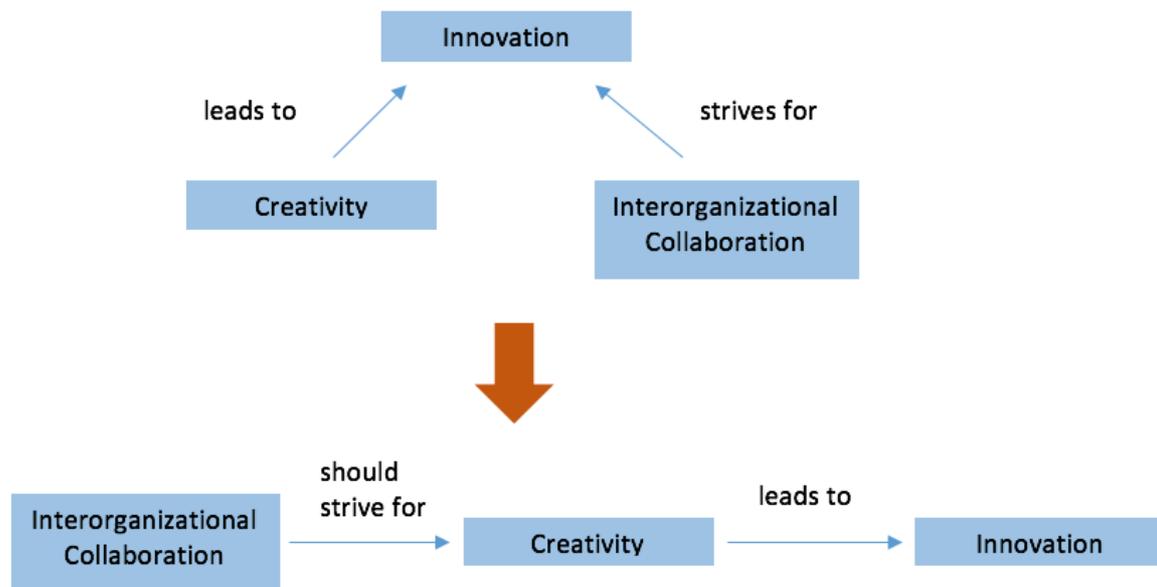


Figure 3.3.: The relationship between creativity, innovation and interorganizational collaboration.  
Own figure.

Even though the interrelation between collaboration projects and creativity was quickly found, including the concept of prejudice has been the most difficult part. It was finally through analysing and comparing different emotional and cognitive processes that are part of the three main topics that led to an understanding of how these are interconnected with each other. Especially important with regard to this was the focus on prejudice as resulting from intergroup relations, which was based on the project's emphasise on interorganizational collaborations which can be considered as intergroup collaborations. On the way to this understanding, theoretical knowledge was obtained about the three topics. Due to the fact that it was from the very beginning of the research assumed that prejudice negatively impact the creative outcome of interorganizational collaborations, particularly focus was on the screening of the existing literature with regard to constraints on, obstacles for and general influence factors of both group creativity and interorganizational collaborations. The final work is a summary and combination of the knowledge gained through this literature research.

Throughout the entire research it was always tried to view the considered objects from different perspectives and stay open minded, while at the same time always be critical towards the researchers' assumptions, suggestions, and conclusions. Thus, theory triangulation was used as a method to analyse and interpret data, in order to develop a comprehensive understanding of the considered phenomena (Patton 1999) (Cartner, et al. 2014). As it becomes apparent through the subsequent literature review, there was a high interest in presenting the different perspectives on a topic to the reader, and in making the reader aware about existing criticism towards these perspectives. The considered themes are so multifaceted, such as the general concept of creativity, that it seemed to be almost impossible to include all the theories, models, and concepts of importance. It was therefore tried to balance the information that provides a general overview about the topics in order to enable the reader to create his or her own perspective on a topic, while also focusing on this information that was especially relevant for the further course of the thesis. It is up to the reader to decide whether or not this approach was successful.

### 3.4. Trustworthiness

Through elaborating on Guba's four criteria for trustworthiness for qualitative research, the reliability and validity of this thesis is presented. The four criteria are: Credibility, transferability, dependability and confirmability (Shenton 2004).

Credibility refers to the internal validity of the conducted research, which means that the the contents and measures of research should be appropriate for the research objectives (Shenton 2004). As previously explained, the research intended to answer three research questions that were intentionally developed in the presented sequence since the second and third question are dependent on the respective previous question. The order of the theoretical contents complies with the order of the research questions. Thus, the thesis is structured in a way that is assumed to be comprehensible, and makes it easier for the reader to understand the author's thought processes. A further point with regard to credibility refers to triangulation. It was previously mentioned that theoretical triangulation is used for the analysis and interpretation of the accessible data which is supposed to result in a holistic picture of the relationship between interorganizational collaboration, creativity, and prejudice. It can therefore be said that an iterative approach was adopted due to the fact that even though subquestions have been answered already, it was tried to receive alternative answers to these questions to generate a more comprehensive understanding. Moreover, the author was regularly meeting the project supervisor for the purpose of exchanging opinions and approaches, and receiving feedback from a more experienced researcher in order to increase the likelihood of the creation of a valuable scientific work. Finally, the thesis is exclusively based on already existing scientific literature whose contents, at one point, must have been approved by other researchers in the respective study area, which illustrates the credibility of the presented contents. In order to not only rely on purely theoretical articles, existing assumptions are often supported by results from case and experimental studies that confirm these assumptions.

Transferability is the second criterion for trustworthiness in qualitative studies. As the term suggests, it is concerned with the transfer of the results of the research to other situations (Shenton 2004). It is for ensuring this transferability that the thesis elaborates on the contexts of the considered situations. In other words, prerequisites for the occurrence of specific phenomena were listed and explained in order to make it clear to the reader what kind of circumstances are required, that certain processes are likely to occur. This allows the reader to compare his or her own situation with the situation that is presented in the thesis, and thus enables transferability. It should also be pointed out that the contents and findings of the projects basically apply to every interorganizational collaboration that requires creative collaboration in the idea generation process, and that other conclusions, such as the contrary nature of creativity and prejudice, even have a certain general validity.

The third criterion is dependability and is concerned with the reliability of the thesis. This means that another researcher potentially should be able to receive the same results and conclusions based on the provided information about how the study was conducted (Shenton 2004). Through possessing background knowledge with regard to the research design and its conduction, readers should potentially be able to recreate this thesis. They are aware about, firstly, the three research questions and the approach that was taken in order to answer these questions, secondly, where, how, and why data were collected, and finally, the author's underlying assumptions of the entire project. This knowledge should allow for a recreation of this work.

Finally, confirmability constitutes the fourth criterion for trustworthiness of qualitative research projects. It refers to the explication of how it is ensured that the presented information and knowledge do not reflect preferences of the author, but rather are characterized by objectivity (Shenton 2004). With regard to confirmability, the already mentioned triangulation is of great importance. However, it was also argued that all research is interpretive, which is why confirmability in the sense of pure objectivity is probably never reached. Nevertheless, this existing subjectivity can be dealt with as long as the research design, its conduction, and the basic assumptions held by author are described in detail, which was the purpose of this chapter.

It can be summarized that the existence of the four criteria credibility, transferability, dependability, and confirmability indicates the trustworthiness of this thesis. Nevertheless, there are limitations. These will be elaborated on in the following section.

### 3.5. Limitations

By making an interdisciplinary project including interorganizational research, group creativity research, and research that is concerned with the psychology of prejudice, the project's complexity increased. Through the inclusion of three seemingly diverse topics, spending time on the literature research in one area simultaneously meant having less time for this searching and reading process in another area. Due to the fact that the project was conducted within four months, it is at one point not possible anymore to read and include further literature, even though there is much more available. Nevertheless, it was tried to receive a comprehensive understanding about the three study topics in order to appropriately relate them to each other.

Furthermore, the thesis is solely based on secondary data by making use of existing scientific literature with regard to the three research areas. Propositions with regard to the development of prejudice for the organizational context have been made by transferring existing intergroup relation theories to the the situation of interorganizational collaborations. These propositions still need to be tested in practice to find out if they prove to be true. Since the chapters subsequent to the proposition development assume that the developed propositions correspond to reality, they lose their value for interorganizational collaboration projects, if the propositions cannot be empirically confirmed. In addition, potential adjustments of the initial propositions to reality could not be made without empirically testing them. Nevertheless, based on the general validity of the intergroup relation theories it is reasonable to assume that they also apply to the interorganizational context.

Moreover, as previously explained, the work is based on the systems approach, which means that the social world is constituted by systems that include various components that are related to each other. Even though awareness about this system as a whole exists, it is, due to complexity and the enormous number of potential components, not possible to consider the system with all its elements. It is therefore that the thesis only refers to a very specific part of the entire entity, and that only these factors were considered that seemed to be most relevant for answering the research questions. Thus, the reader should be aware of that there are also other potential factors that influence the considered situations, even though they are not explicitly mentioned.

A further limitation refers to the author's initial knowledge about the psychology of prejudice. Due to a course of study that was focusing on organizations and innovations, it should be pointed out that the author, first of all, needed to develop a basic understanding about the psychology of prejudice. It is therefore that the reader should be aware of that all

the provided psychological knowledge in the thesis is based on four month of research in this area.

A further comment should be made with regard to the before mentioned complexity of the thesis due to the involvement of three main topics. As previously shown, it is not difficult to explain the relationship between interorganizational collaboration and creativity. In contrast, including the concept of prejudice into this relationship cannot be done that easily. Due to the complexity that arises through the involvement of prejudice, the reader sometimes needs to be aware of small details in order to understand why certain processes occur. To not repeat the content over and over again, the reader can find, when necessary, a note that refers to the section with the required knowledge to understand the author's line of thought. However, generally, the thesis is structured in a way that should enable the reader to read through the thesis without the need to permanently turn to another page in order to understand what is written on another page. Nevertheless, the existing cross-references are aimed at giving assistance to the reader if he or she misses knowledge for understanding the content.

A final note should be made with regard to the procedure of writing this thesis. It should be pointed out that besides the author itself it was only the project supervisor that way involved in the development of this work. Despite the author's constant effort to question and challenge the own assumptions and conclusions, and despite the regular meetings with the project supervisor, it is likely that the involvement of further people with a more distant view on the project might have be valuable for gaining new perspectives on the topic. Sometimes, too much involvement makes it difficult to see the forest for the trees. Nevertheless, being permanently aware about the main objectives of the research and seeing the problem that is to solve as a whole should partly compensate for the involvement of too few people.

## 4. Literature Review

The literature review serves the purpose of providing the reader with an overview about theories, concepts, and basic assumptions underlying the topics under investigation. These topics are creativity, especially group creativity, interorganizational collaboration and prejudice. The first part of this chapter is concerned with providing the reader with a basic understanding about what creativity actually is. The second part explains the connection between creativity and innovation, which leads to the importance of the third part, organizational creativity. Thereafter, the fourth section includes the development of modern creativity research and highlights that creativity developed from a topic that initially exclusively received attention by psychologists, to an interdisciplinary one, which is also accompanied by increasing complexity of this phenomenon. By providing a first insight into the different approaches that can be taken with regard to creativity, this part leads to the subsequent section which includes various theories of creativity. Throughout the fifth subchapter, it becomes apparent that creativity is a multifaceted phenomenon that is difficult to grasp by only one theory. It is therefore that various theories and approaches are presented in order to enable the reader to get a holistic picture of creativity. Nevertheless, the reader should still be aware of these theories and concepts that are especially important for the course of this thesis, which is why most sections highlight those. Thereafter, the sixth subchapter is concerned with interorganizational collaboration and puts emphasis on a company's innovation capability which is needed in order to survive in the long term. In order to develop this capability, it is recommended that a company gains access to and exploits diverse knowledge and skills that also lie beyond the organization's boundaries. Group creativity, or creative collaboration, provides a potential method that enables this access and exploitation, which is why this topic constitutes the seventh section of this chapter. It is especially concerned with the effectiveness of group brainstorming the realization of the creative potential that a group possesses. Since working in groups is often said to inhibit creativity, different factors are presented that reduce these inhibitory effects. The section concludes by presenting eight principles that enhance group creativity. The subsequent penultimate section refers to the psychology of prejudice and provides the reader with an introduction to that topic. Special emphasis is put on the cognitive and motivational processes that underlie the development of prejudices, as well as on the distinction between the concepts of stereotypes, prejudice and discrimination. With regard to the cognitive processes, categorization has a key role. It constitutes the basis for the differentiation between one's ingroup and outgroup, which leads us to theories with regard to intergroup relations. Two of these theories, namely realistic group conflict theory and social identity theory, are presented, and conclude the subchapter. Finally, the last section provides a summary about the most important points that the previous subchapters have uncovered, and explains how these can contribute in order to find answers to the three research questions that underlie this thesis.

### 4.1. An Introduction to Creativity

Creativity is an important and eclectic phenomenon, but through its great versatility difficult to grasp and define (Runco 2007). It is viewed as both a process and an outcome (e.g., Ancona and Caldwell; Kessler and Chakrabarti 1996), which should be beard in mind when reading the following definitions of creativity. They provide a first impression about the characteristics that constitute this term.

“the generation of products or ideas that are both novel and appropriate”

(Amabile and Hennessey 2010, p. 570)

“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”

(Plucker, Beghetto and Dow 2004, p. 90)

“generation of *something* that is both *novel* and *useful* towards accomplishing *desired goals*”

(James and Drown 2012, p. 18)

“creativity as manifested in the intentions and motivation to transform the objective world into original interpretations, coupled with the ability to decide when this is useful and when it is not”

(Runco 1996, p. 4; italics in the original)

“the production of novel and useful ideas by an individual or small group of individuals working together”

(Amabile and Pratt 2016, p. 158; italics in the original)

“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.”

(Amabile 1996, p. 35)

Considering these definitions, creativity includes two key components, which are novelty/originality and usefulness/appropriateness. Even though, a universal creativity definition does not exist, these are the two characteristics that are widely agreed upon (e.g., Rhodes 1961; Kasof 1995; Beghetto and Kaufman 2007). These components also form the basis for assessing a creative product (Amabile 1996). Furthermore, the above listed definitions demonstrate that creativity includes the generation or production of an outcome (e.g. an idea or a product). Moreover, some of the definitions include the achievement of an objective and the fulfilment of a specific task, what implicates that creativity involves some kind of problem solving (see also Ward and Kolomyts 2010; Fox and Fox 2010; Cropley and Cropley 2010; Amabile and Hennessey 2010). Finally, even though only explicitly mentioned in one definition, creativity, because of its high versatility, needs to be judged in its social context. This means that in order to assess creative ideas, products, services, procedures or processes, the context in which these occur must be considered. Due to the fact that creativity cannot be viewed as an independent event, and that it occurs in different domains and at different levels, it is of crucial importance to take its social context into account, for ensuring an appropriate perspective for its evaluation (Plucker, Beghetto and Dow 2004; Richards 2001; Redmond, Mumford and Teach 1993). Thus, it becomes evident that creativity, as the provider of novel, useful and socially valued solutions to problems of almost any kind, is of immense value for everyone and everything. Since it contributes to development and improvement in any domain (Johansson 2004), creativity is seen as “one of the key factors that drive civilization forward” (Amabile and Hennessey, p. 570) and is even described as “essential for our survival as a species” (Paulus and Nijstad 2003, p. vii). Regarding the fact that change is a ubiquitous phenomenon, creativity provides a useful tool for coping with change. However, this does not

imply that creativity should only be seen as an instrument for solving problems, and thus, as being reactive; rather, one should also be aware of the proactive contribution, that is made by creativity, meaning that it is aimed at avoiding problems through causing change (Heinzen 1999). Consequently, creativity can be both the reaction to and the origin of change. The civilization's development through creativity can take place in two different manners—continuous and discontinuous. This can be explained through two opposing abilities that are required for the emergence of creativity. These are, maturity, as knowledge, skills and experience on one side, and immaturity, as childlike behaviour and playfulness on the other side (Runco 1996). The contradictory requirements for creativity illustrate its ambiguous and complex nature, which makes creativity hard to grasp. Due to its ambiguousness, Runco (2004) even suggested to stop using the term creativity, and instead only use it as an adjective in combination with a noun, such as, creative personality, creative potential, creative performance, creative product, etc., in order to not confuse their different meanings, which are all part of the universal term creativity. Since the term is still widely used, one needs to be aware of its various meanings, in order to recognize the difference between creativity being used in one context and creativity being used in another context. Sternberg (2006) for example, stated that creativity can be both measured and trained. He supplemented his assertion by including “at least in some degree” (p. 2), which might indicate the reference to sub-expressions of creativity.

In sum, creativity is a multi-layered and ambiguous phenomenon, including the interaction of a multitude of elements that are sometimes even contradictory. But this complex nature and creativity's versatile application possibilities are exactly what make it an interesting and desired occurrence in almost any field and area all over the world.

## 4.2. Creativity and Innovation

Similar to creativity, innovation is seen as one of the driving forces for society's development and progress, and its significance is likely to continue increasing, taking into account the impact of globalization and accelerating pace of change on the world economy, society and the environment (Mayfield 2011). Both creativity and innovation require some certain already existing inputs, such as resources, skills and knowledge. These need to be combined in new ways, in order to produce creativity and innovation (e.g., Amabile and Pratt 2016; Cropley and Cropley 2010; Fagerberg 2005; Lundvall 2004). Moreover, as mentioned before, the results of creativity can be either continuous or discontinuous, which is tantamount to the main classification of innovation as being either incremental or radical (Tidd and Bessant 2009). Since creativity and innovation share various characteristics, it is comprehensible that the terms are often used interchangeable (e.g., Crossan and Apaydin 2010). Nevertheless, a distinction between these expressions can be made and is necessary, since the subsequent work differentiates between them. The difference between creativity and innovation is based on the temporal order of their appearance, which is first creativity and then innovation. This is due to the fact that innovation—which emerges from acts within the organization—starts with creativity. While creativity refers to the generation of both novel and useful ideas, innovation is related to the ensuing implementation of those creative ideas (Amabile, et al. 1996; Amabile and Pratt 2016; Mayfield 2011). This connection between creativity and innovation is once again illustrated by the following definition, according to which “[i]nnovation is the successful *exploitation* of new ideas” (Innovation Unit (2004) UK Department of Trade and Industry in Tidd and Bessant 2009; italics added). From this will be deduced that creativity and innovation are differentiated by the particular process that takes

place, which is either generation or implementation of creative ideas. This said, one might see parallels to the differentiation between invention and innovation. Invention, just like creativity, is sometimes referred to as the creation of new ideas (e.g., Galbraith 1982). However, also invention and creativity do not appear simultaneously due to the fact that invention arises from a process that includes, inter alia, creativity (Swann 2009). With this, inventions should be seen as the creative ideas themselves (Fagerberg 2010; Akrich, Callon and Latour 2002), rather than the generation of these. This results in the following order for the innovation process: (1) Creativity: the generation of novel and useful ideas, (2) Invention: the creative ideas themselves, and (3) Innovation: the successful implementation of the creative ideas.

Furthermore, it should be clarified that “creativity represents a necessary but not sufficient condition for innovation” (Mumford, Hester and Robledo 2012, p. 5), because solely through creativity the successful implementation of ideas cannot be guaranteed. Consequently, creativity is only one component, besides other factors, that is required for successful innovation (Amabile, et al. 1996).

### 4.3. Organizational Creativity

Through the tight link between creativity and innovation, creativity is an indispensable part of innovative companies and organizations (Runco 2004), which is why there exist a continuous effort in gaining more knowledge about organizational creativity (James and Drown 2012). In accordance with the before mentioned relationship between creativity and change at a general level, the logical conclusion is that organizational creativity causes organizational change. Reflecting upon the comprehensive literature on the topic of organizational change, including various journals, handbooks and encyclopaedias, it becomes obvious, that organizational creativity, as the source of organizational change, is of major importance to businesses (Woodman, Sawyer and Griffin 1993). Organizational creativity, which is sometimes also referred to as corporate creativity, includes a strong emphasis on the social context of creative endeavours. Considering the widely accepted definition for organizational creativity by Woodman and his colleagues (1993), according to which organizational creativity is “the creation of a valuable, useful new product, service, idea, procedure, or process by individuals working together in a complex social system” (p. 293), the significance of the social framework under which creativity emerges is clearly shown. Therefore, organizational creativity cannot be viewed as an independent phenomenon, instead, it is emerging from a complex social system, including different influence factors.

The culture and systems of an organization, which in turn emerge from the culture and systems external to the organization, are two of these factors and are of crucial importance. They constitute the basis for organizational creativity, since their provision of materials, patterns, knowledge, tools, techniques and other resources determines the likelihood of creative activities. Thus, the company’s culture and systems form the starting point for creativity and can both inhibit and enhance creative endeavours through the interplay of their individual ingredients (James 2005; James and Drown 2012). A further interesting point about organizational cultures and systems refers to their influence on the assessment of creative ideas, products, services, procedures or processes. In order for something to be creative it must, inter alia, be judged as novel or original, meaning that it has to differ from what is known already. At the same time, it needs to be socially accepted, which means that it still has to be conform to the social standards for being valued (Plucker, Beghetto and Dow 2004; Amabile 1982; Amabile and Pratt 2016). Consequently, the evaluation of ideas and whether or not these are labelled as creative, is highly dependent on the ideas’ judges and the social context

in which they see these ideas. Thus, organizational creativity and its outcomes can look very different across varying domains and companies. Reasons for this are the different organizational characteristics (e.g. structure, goals, mission, culture, etc.), that make up an enterprise, since they, as already mentioned before, determine the basis for the types of creative activities that are conducted. This results in organizational creativity being structurally anchored in the organization through emerging from the complex interaction between different components at different levels (Styhre and Sundgren 2005; Woodman, Sawyer and Griffin 1993). In order to better illustrate this structural embeddedness, it will be further elaborated on both the before mentioned different levels and its different components.

Organizational creativity can be regarded as consisting of three different levels, namely, the individual level, the group level and the organizational level. All three levels encompass various components. An analysis of the components that influence creativity on an individual level includes for example cognitive abilities that underlie creative thought, affect, motivation—both intrinsic and extrinsic—, personality traits and skills in a specific task domain. Components that belong to the group level of organizational creativity are, inter alia, group compositions, group processes and group climate. Finally, organizational creativity is influenced by elements, such as, the organizational structure, culture, knowledge and environment—both internal and external—, the organization's motivation to innovate and leadership styles, which are all parts of the organizational level. Dependent on the nature of the mutual interactions between these components, they can serve to either have a detrimental or conducive effect on organizational creativity. Bearing in mind that the constituents mentioned are only some of these that have an impact on organizational creativity, one can imagine that the interactions between the three levels and their components result in a highly complex system, which is necessary for the representation of organizational creativity in its entirety (Woodman, Sawyer and Griffin 1993; James and Drown 2012; Amabile and Pratt 2016; Amabile 1988). A simplified visualization of such a system can be found below in *Figure 4.3*.

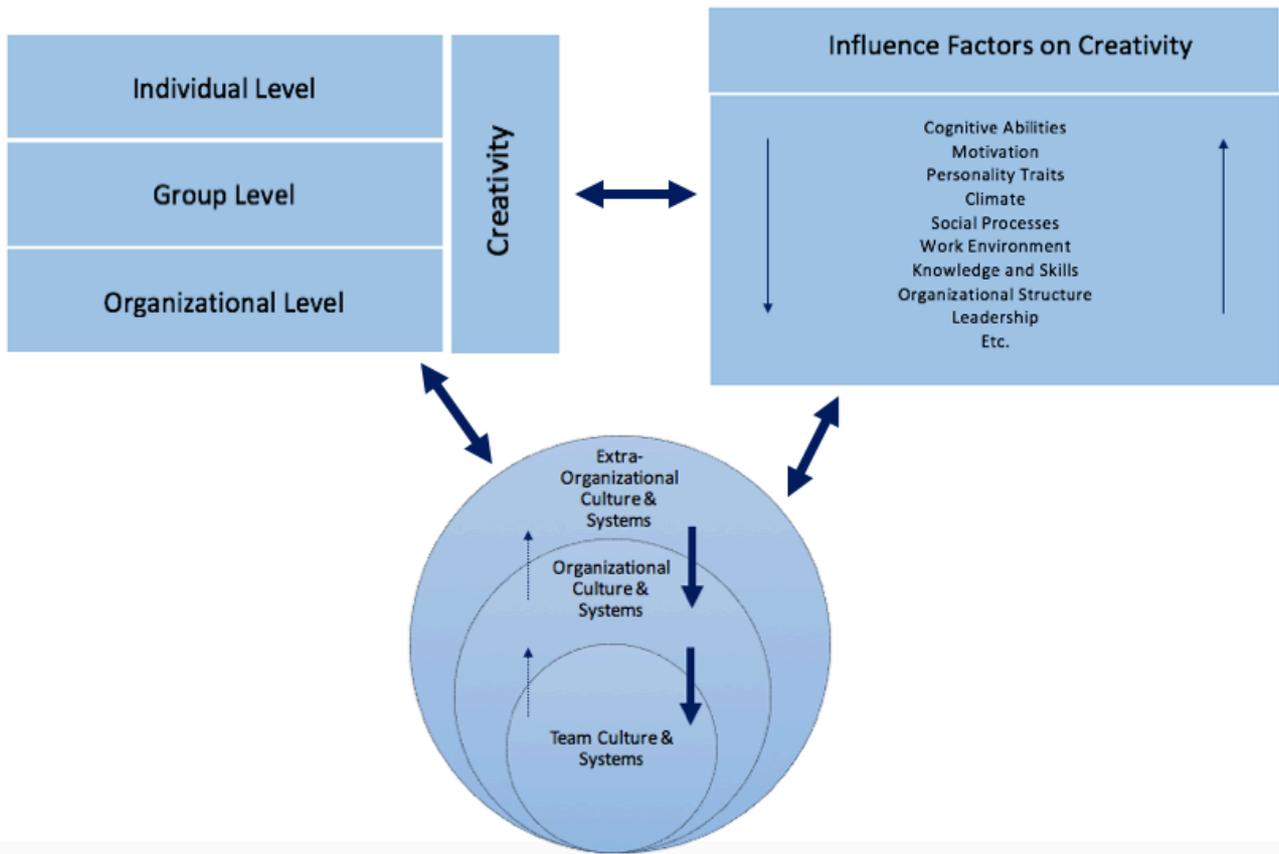


Figure 4.3.: A model of multi-level organizational creativity.

Adapted from James, Keith, and Damon Drown. 2012. "Organizations and creativity: Trends in research, status of education and practice, agenda for the future." In *Handbook of Organizational Creativity*, (Ed.) Michael D. Mumford, 17-38. London: Elsevier.

#### 4.4. The Development of Modern Creativity Research

Various creativity researchers attribute the beginning of modern creativity research to the psychologist Joy Paul Guilford, who has been the president of the American Psychological Association in 1950 (e.g., Styhre and Sundgren 2005; Runco 2004; Rhodes 1961). In his seminal paper from the same year, he deplores that there is no investigation undertaken about creativity by his colleagues, despite its enormous importance for society (Guilford 1950). This call led to a rise in creativity research. The first ten years, the research was dominated by psychologists and educators, who focused on the analysis of outstanding creative individuals and their characteristics. The person-centred research was followed by addressing the question of the cognitive processes that underlie creative thought and behaviour. Thereafter, from the 1980s, creativity research started to focus on social systems and cultures and how these influence creativity, by which creativity research became a scientific field, which was no longer solely attractive to psychologist and educators (Sawyer 2012). Since Guilford, the field of creative studies became more diverse and more complex, due to the fact that it implies an increased demand for interdisciplinary research—including for example psychologists, biologists, historians, economists and sociologists—, what is caused by the various domains, for which creativity is relevant, as well as by the diverse factors and processes, that have an impact on the emergence of creativity. The vast scope of research shows again the

tremendous importance of creativity (Runco 2007; Runco 2004). The topic even got its own journals, starting with the *Journal of Creative Behavior*, which was established in 1967 (John Wiley & Sons 2017a), followed by journals such as *the Journal of Product and Innovation Management* in 1984 (John Wiley & Sons 2017b), the *Creativity Research Journal* in 1988 (Informa UK Limited 2017), the *International Journal of Creativity and Problem Solving* in 1990 (former *the Korean Thinking & Problem Solving*) (The Korean Association for Thinking Development 2017), the *Creativity and Innovation Management Journal* in 1992 (John Wiley & Sons 2017c), and the *Journal of thinking Skills and Creativity*, which published its first volume in 2006 (Elsevier 2017). The beginning of the new millennium even entailed an encyclopaedia of creativity, as well as its first handbooks (Runco 2004). Even nowadays, creativity research is growing, which seems logical, due to its increasing interdisciplinarity (Amabile and Hennessey 2010; Runco and Albert 2010).

Taking into account the before mentioned importance of creativity for organizations, it is hardly surprising that the scientific interest in creativity for the field of businesses and management was also increasing throughout the last years. James and Drown (2012) analysed the overall volume of publications in relation to creativity and innovation in the work context in leading organizational science journals from 1995 to 2009, whereby particular attention was paid to the three different levels (individual, group, organizational) of creativity. They concluded that, even though the number of raw publications increased for all three levels during that time, the group-focused, as well as the multi-level creativity studies belong to an underresearched area. For this reason, this work puts special emphasis on group creativity, or creative collaboration, which will be elaborated on in section 4.7. in this chapter.

## 4.5. Theories of Creativity

### 4.5.1. *The Connection between Domain Generality and Domain Specificity*

One of the questions that creativity researcher devoted special attention to, is related to creativity as being either domain-specific or domain-general, since the answer to this question is accompanied by major implications on creativity assessment, training, research and theory (e.g., Baer 2012; Plucker 1998; Baer and Kaufman 2005). While domain-general creativity would allow for universal creativity theories, domain specificity entails the demand for a multitude of theories, whose validity depends on the examined creative domain. The same applies to methods for creativity training, research and assessment.

According to Baer (2012), domain generality implies, that creative skills that have been learned in a specific context can be successfully applied in another context. He assigned great importance to the transfer process that needs to occur in order to refer to creativity as domain general, whereby he pointed out that the transfer of something previously learned is more likely to happen between similar contexts. Ivcevic (2007) suggested that “domain generality would be supported by high intercorrelations among different creative behaviours, and a diverging set of psychological descriptors for these behaviours, while domain specificity would be supported by relatively low correlations among different creative behaviours, and a diverging set of psychological descriptors of these behaviours” (p. 272). Consequently, high correlations between achieved creativity levels by individuals in different domains confirm the domain-generality of creativity, while low correlations confirm the domain-specificity of creativity. Based on this method of verification, Baer (2012) analysed a multitude of studies that have assessed creativity of individuals in diverse domains. His analysis resulted in low correlations between different creative behaviours, thus reasoning for the domain specificity of creativity. He further emphasised, that domain specificity does not imply, that individuals

cannot be creative in different domains, it rather implies, that the achieved creativity levels in different domains are independent from each other. Thus, the degree of “creativity in one domain is not predictive (either positively or negatively) of creativity in other domains” (p. 21).

On the other side, a meta-analysis of personality characteristics in different creative domains led to the conclusion that some personality traits are domain general (Feist 1998). In accordance with these findings, Plucker (1998) stated that the answer to the question about domain generality or specificity of creativity is highly influenced by the evidence one looks at. In general, the assessment of creative performance of individuals in different domains results in domain specificity, while psychometric studies and those that focus on personality characteristics conclude that creativity is a domain-general phenomenon. Recent research argues for both domain-general and domain-specific views of creativity. The Amusement Park Theory model of creativity, for example, offers a hybrid solution to the generality-specificity-question by moving from the first to the fourth creativity level. Thereby, the first creativity level includes very general requirements, while each following level increases in its domain-specificity (Baer and Kaufman 2005), meaning that the deeper one gets into a specific topic, the more domain-specific elements are required to make creative contributions. Also other authors argue for the hybrid solution by putting emphasis on the increasing importance of expertise for every subsequent creativity level (e.g., Plucker 1998). Yet others suggest that, rather than referring to creativity as domain-general and/or domain-specific, one should distinguish between creative potential and creative performance. Thereby, the former—including inter alia personality traits and cognitive abilities—can be viewed as being domain-general, while the latter should be seen as domain-specific (see Runco 2004; Sternberg 2006). This makes perfect sense, thinking back to the notion, that we need to see something supposedly creative in its context in order to properly assess if it is creative or not (see section 4.1.), meaning that the evaluation of an actual performance requires domain-specificity.

Consequently, the question of domain generality or specificity can ultimately be viewed as one of the meaning of creativity, caused by its ambiguous and complex nature and the plurality of sub-expression it comprises.

#### *4.5.2. Categories of Creative Magnitude*

The classification of creative magnitude provides a framework, which enables the differentiation between four levels of creative performance, namely, mini-c, little-c, Pro-c and Big-C (Kozbelt, Beghetto and Runco 2010; Kozbelt 2011; Beghetto and Kaufman 2009). Mini-c creativity is defined as “the novel and personally meaningful interpretation of experience, actions, and events” (Beghetto and Kaufman 2007, p. 73; italics in the original). Subjectivity and intrapersonal interpretation of occurrences are what differentiates mini-c from the other levels of creativity. Its focus lies on creative experience and the learning process. Mini-c creativity is followed by little-c creativity, which is about the everyday creative contributions that are made. Unlike mini-c, little-c creativity includes actual creative products and an external judgment of these. This description also applies to the subsequent level of creative magnitude, which is Pro-c creativity. However, the creative maturation is higher in Pro-c than it is in little-c creativity, and even though Pro-c creativity also refers to everyday creativity, it refers to everyday creative performance in a professional manner, thereby, bridging the transition from little-c to Big-C creativity. Finally, the latter represents the highest level of creative maturation. It is about extraordinary creative contributions that have a lasting impact on the field to which they relate (Beghetto and Kaufman 2007, 2009).

A distinction between these four categories assists in comparing the subsequently presented taxonomy of theories of creativity (see section 4.5.4.) by illuminating the theories' differences and similarities with regard to their comprehensiveness and their focus area, and thus allows for their categorization (Kozbelt, Beghetto and Runco 2010; Kozbelt 2011; Beghetto and Kaufman 2009). It also allows the scope of this work to be narrowed down and to assign the research to one of the categories. Since this thesis is concerned with creative performance in the work context, it can be assumed that the creative outcome will be judged, and that the process that leads to this outcome is executed in a professional manner. It is therefore that this work puts special emphasis on both little-c and Pro-c creativity.

### *4.5.3. The Four/Six Ps of Creativity*

As previously mentioned, creativity implies a plurality of meanings. For the purpose of establishing clarity concerning these meanings, the Four Ps of creativity—which later became the Six Ps—offer a framework to approach the topic creativity from different angles. They also serve as a tool in section 4.5.4. 'The taxonomy of theories of creativity' for the purpose of stressing out the respective focus and scope of each category of creativity theories.

Rhodes (1961), who identified the Four Ps, distinguished between the creative person, the creative product, the creative process and the creative press, which was later often referred to as place. The person-centred perspective, as the name suggests, has the creative individual as its unit of analysis. These studies focus, for example, on personality traits, attitudes, intellect, behaviour and/or self-conception. The creative product, in turn, refers to an actual creative performance that can be perceived from the creator's external environment and judged by its individuals. Originality, usefulness and social context are important criteria for the assessment of a supposedly creative product (Rhodes 1961; Runco and Kim 2011). The third P focuses on processes that yield a creative output, including, inter alia, the analysis of learning processes, perception, cognitive processes that underlie creative thought and /or communication. Graham Wallis (1926) presented one of the first models for creative problem solving. The four phases of his model consists of Preparation—systematic analysis of the problem—, Incubation—consciously and unconsciously wandering of the mind for the exploration of new perspectives on the problem—, Illumination—the actual appearance of an original idea— and, finally, Verification—the idea is examined, tested and implemented—. Despite some minor changes in the creative problem solving model, its core aspects remained unchanged for over eighty years. It should be noted as well, that the model does not represent a linear process, but an iterative one instead (Fox and Fox 2011). The fourth P presented by Rhodes (1961), was the creative press (later often referred to as place). Creativity from the press perspective includes the examination of environmental factors that potentially influence creative behaviour, both in a positive and in a negative manner. Murray (2008) divided these factors into alpha and beta presses. The former is part of the objective world, while the latter is only existing when the intrapersonal interpretation makes them a press.

These four Ps—person, product, process and press— are aimed at organizing the vast research on creativity, whereby one should bear in mind that they are strongly interconnected with each other (Rhodes 1961; Runco and Kim 2011). Later on, the Four Ps of creativity were supplemented by persuasion as the fifth P, which was presented by Simonton in 1995. His perspective on creativity puts emphasise on its social context factors. According to him, understanding persuasion—or exceptional personal influence as he named it—forms an important part for grasping creativity in its comprehensiveness, since individuals must be persuasive—change people's thinking—to make their performance being recognized as

creative (Simonton 1995). The sixth P refers to **creative potential** and **creative performance**. Instead of forming their own category, they help to situate the other five Ps in a hierarchical framework for the study of creativity. Thereby, the emergence of creativity is a procedure, that starts with creative potential and turns into actual creative performance under the necessary supportive conditions. Creative potential includes the Ps person, process and press, while product and persuasion belong to creative performance (Runco and Kim 2011).

Summing up, it can be said that the six Ps provide a clear framework for the different perspectives on the topic of creativity. The five Ps, person, process, press, product and persuasion, can be distinguished between creative potential and actual creative performance, whereby the latter one is the most desirable when aiming at progress. However, despite these categorizations, it is important to keep in mind that the Ps are intertwined and mutually influence each other.

With regard to this thesis, several of the presented Ps are important. Throughout the following chapters, the main focus lies on the three Ps person, process, and press. Furthermore, the distinction between creative potential and actual creative performance has a key role in this thesis.

#### *4.5.4. The Taxonomy of Theories of Creativity*

In order to provide the reader with a comprehensive overview about the different perspectives on creativity, this section serves to describe the ten major categories of creativity theories. Because of the fact that not all of these are relevant for the subsequent work, but the reader should still know that they exist, it is only given a very brief introduction to each category. For a more detailed overview about the taxonomy of creativity theories, the second chapter written by Kozbelt, Beghetto and Runco (2010) in 'The Cambridge Handbook of Creativity' is recommended. Before getting to the substance of this section, it should be stressed again, that this section is about metatheories of creativity, meaning that each theory includes several theories of creativity. But since an explanation of all of these would go beyond the scope of this work, it is only focused on the taxonomy of creativity theories. As mentioned in the two preceding sections, each description of a category is supplemented by information about the level of creative magnitude and the Ps that it addresses in order to simplify the comparison between the different theories' foci and scopes.

##### *Developmental Theories*

Developmental theories have the purpose of understanding the origin of and influence factors on creativity by scrutinising the lives, experiences, backgrounds or family structures of outstanding creative individuals. In addition, these theories often provide suggestions for the creation of an appropriate environment in order to exploit existing creative potential.

They mainly emphasise the person, place and potential of creativity, and range from mini-c to Big-C (Kozbelt, Beghetto and Runco 2010; Kozbelt 2011).

##### *Psychometric Theories*

Psychometric theories aim at measuring certain aspects that are necessary for creative performance. They focus, inter alia, on the difference between intelligence and creativity, the relation between cognitive abilities that are required for convergent thinking and those that are required for divergent thinking, and they are concerned with the reliability and validity of creativity assessment. Furthermore, psychometric theories analyse the extent to which creative thinking abilities are domain-specific or domain-general.

They emphasise the creative products, and range from little-c to Big-C (Kozbelt, Beghetto and Runco 2010; Kozbelt 2011; Mumford, Hester and Robledo 2012).

### *Economic or Investment Theories*

These theories focus on the market for creativity, including macro-level processes, different influence factors and the interplay between them, which finally leads to a certain allocation of resources that are necessary for creativity. Positive market incentives that encourage creativity most likely enhance creative behaviour and creative performance, while negative incentives, such as additional costs, impede their occurrence.

Economic and investment theories comprise all Ps, except from the creative process, and range from little-c to Big-C creativity (Kozbelt, Beghetto and Runco 2010; Kozbelt 2011).

### *Stage and Componential Process Theories*

Stage and componential process theories are aimed at reconstructing the process that led to the appearance of creative performance, by dividing it into sub-processes. The sequence of the individual process steps should not be considered as being linear, rather, each process step allows for multiple repetitions and can be combined with the other steps into new process sequences. As the name indicates, the theories also focus on different component mechanisms. An analysis of these can finally help to predict which component combinations are conducive to the production of creative output, and which are not likely to induce or even inhibit creative performance.

Stage and componential process theories emphasise the creative process, and span from mini-c to Big-C creativity (Kozbelt, Beghetto and Runco 2010; Kozbelt 2011).

### *Cognitive Theories*

Cognitive theories analyse the cognitive processes—“perceiving, recording, storing, organizing and using information” (Martinsen, Kaufmann and Furnham 2011, p. 214)—that underlie creative thinking and examine the existing differences of such processes between individuals.

These theories encompass the process and person of creativity, and ranges from mini-c to Big-C creativity (Kozbelt, Beghetto and Runco 2010; Kozbelt 2011).

### *Problem Solving and Expertise-Based Theories*

These theories are based on the notion that the cognitive processes, which cause creative thinking, can be partly controlled through the consideration of different influence factors. These factors include the existing knowledge base and the strategy that is applied for problem solving. Creativity is viewed as a rational phenomenon, which emerges through the problem solving process and domain-specific knowledge. However, one should bear in mind that these two factors are necessary but not sufficient conditions for the production of something creative.

Problem solving and expertise-based theories emphasise the creative process and person, and include little-c, Pro-C and Big-C creativity (Kozbelt, Beghetto and Runco 2010; Kozbelt 2011).

### *Problem-Finding Theories*

Problem-finding theories are a counter-reaction to the otherwise widely considered process perspective on creativity. Problem-finding theories, as the name indicates, focus on the process of finding a problem. The theories strive to gain more knowledge about both the

procedure, that makes an individual recognize a problem as such, and the personal reasons for them to further develop and understand this problem. The theories are based on subjective perceptions and experiences.

They comprise the creative person, process and potential, and solely include the mini-c level of creativity (Kozbelt, Beghetto and Runco 2010; Kozbelt 2011).

### *Evolutionary Theories*

These theories compare the emergence of creativity with theories on biological evolution processes. An evolutionary creativity theory, that is widely known, is the one presented by Dean Keith Simonton (2009). He referred to creativity as a Darwinian phenomenon, which includes blind variation and selective retention. The generation of blind variations—ideas—through creative thought, both in a conscious and unconscious manner, is the first step in the process. It is followed by selective retention, whereby the selection process is guided by certain evaluation criteria, such as that the idea needs to be novel and useful.

Evolutionary theories encompass the creative person, process and press/place, and emphasise primarily Big-C creativity (Kozbelt, Beghetto and Runco 2010; Kozbelt 2011; Simonton 2009).

### *Typological Theories*

Typological theories are investigating the differences—instead of the often analysed similarities—that exist between creative individuals and try to find an explanation for these. Typologies of creative individuals are created for the purpose of understanding the variability in their personalities, their working methods and their career path. Some theories use mutually exclusive categories for their typological framework, while others make use of numerous continuous dimensions for the differentiation between individuals in order to achieve less exclusivity for typologies. Yet other studies are even relating the components, in which creative individuals differ, to each other by including various levels of analysis. This allows for a comprehensive overview about the multitude of factors, operating at different levels, which shape creative individuals.

Typological theories primarily emphasise the person, but consider the process, press/place and product as well, and range from little-c to Big-C creativity (Kozbelt, Beghetto and Runco 2010; Kozbelt 2011).

### *Systems Theories*

Similar to the most comprehensive typological theories, systems theories aim at providing a better understanding about the multiple factors and the multilevel system that constitute creativity. As the name indicates, creativity is approached from a systems perspective, where various components are dependent on, and interact with each other. From a systems perspective, it is important to consider the context of the entire range of influencing factors at different levels in order to obtain a comprehensive, valid and meaningful understanding of creativity. Unlike other theories, systems theories emphasise the impact of social and cultural factors on creativity. The theories' comprehensiveness is their greatest strength and weakness at the same time. They provide extensive models for creativity, like no other theory did before, but their qualitative characteristics make it hard to verify assumptions, receiving valid and reliable results. In addition, the theories' high degree of interdisciplinarity—including various levels of analysis—poses a challenge to creativity researchers. Since the systems approach is widely used with regard to organizational creativity, section 4.3. about creativity in

organizations provides deeper insight into the topic and presents a systems model for organizational creativity in *Figure 4.3*.

Systems theories encompass all Ps, and span from little-c to Big-c creativity (Kozbelt, Beghetto and Runco 2010; Kozbelt 2011; Puccio and Cabra 2010; Simonton 2012).

The various perspectives on, and research approaches to creativity once again demonstrate its ambiguous and complex nature. It is of immense importance that such a variety of perspectives on creativity exists, since these different approaches collectively enable the achievement of a more comprehensive understanding of the phenomenon. However, it should be noted that some of the previously presented theories did not manage to make and integrate novel findings in order to further develop the theory, and that they operate quite rigid, considering the very dynamic and flexible nature of creativity. Additionally, many creativity researchers seem to prefer to remain in their field of expertise, which means that creativity, even though it calls for the integration of multiple factors and interdisciplinarity, is only researched at one level of analysis while only focusing on a small selection of factors. Furthermore, many researchers follow the trend, instead of following up on results that are ambiguous or even contradictory towards existing assumptions. In order to grasp creativity in its entirety and make progress in this study area, research continuously needs to revise existing theories and models through new insights, which arise through new and better data collection and analysis (Kozbelt 2011; Runco 2004; Amabile and Hennessey 2010). Many authors (e.g., Kozbelt, Beghetto and Runco 2010; Amabile and Hennessey 2010; Styhre and Sundgren 2005; Runco 2004) explicitly emphasise the importance of the plurality of perspectives on creativity, including different definitions, concepts and approaches. These authors suggest, to not place more value on one perspective to the disadvantage of another, but to understand creativity as emerging from a dynamic and interdisciplinary system of various interconnected influence factors operating at different levels. Thus, researchers that solely investigate specific components at specific levels of analysis without considering the existence and influence of further components and levels, should be aware of the fact that results of these investigations are less valid and fruitful for the generalization in relation to creativity.

#### 4.6. Interorganizational Collaboration

In a dynamic market environment that is characterized by continuous and accelerating change, the permanent improvement and maintenance of an organization's innovation capability constitutes the key source for securing a competitive advantage and facilitating organizational growth through a successful performance (Crossan and Apaydin 2010; Damanpour 1991; Mone, McKinley and Barker 1998). With regard to this, literature about strategic management on innovation emphasised that the organization's access to a multitude of sources for acquiring new inputs is of immense importance (e.g., Nelson and Winter 1982; Cohen and Malerba 2001; Yayavaram and Ahuja 2008). It is therefore, that long-term innovation strategies should not exclusively include knowledge and capabilities that are produced within the company, but rather encourage an organization to also to make use of knowledge and capabilities that origin from actors outside the organization (Tidd and Bessant 2009). This clearly indicates that organizations should strive for gaining access to physical and mental resources that are possessed by other organizations. This is exactly where interorganizational collaborations come into play, since they can facilitate the flow of resources, information, and knowledge between different organizations, and thus can be an effective strategy for

improving the participating organizations' innovative performances (Faems, Van Looy and Debackere 2005; Un, Cuervo-Cazurra and Asakawa 2010; Adams, Bessant and Phelps 2006). It should be pointed out that it is not only small and medium organizations that benefit from interorganizational exchanges, but that it is also large international organizations that should not solely rely on their internal resources, since even these do not possess all the existing knowledge and technologies that might be relevant for the industry they are operating in (Tidd and Bessant 2009; Howells 2000).

In order to be able to start an interorganizational collaboration, the participating organizations need to be in contact with each other. It is therefore that networking is the key to these collaborations. It includes relationship building with external potential collaboration partners and maintaining good connections with these (Tidd and Bessant 2009). The most important function of networks and collaborations is to gain access to resources that are not internally available. In line with this, Gautam Ahuja (2000) defined the establishment of an interorganizational collaboration as "a voluntary arrangement between independent organizations to share resources" (p. 426). An increasing amount of firms establish networks for cooperating with other organizations in order to strengthen their innovation capabilities (Tidd and Bessant 2009). Since the process that results in the development of innovations can be said to be intensive with regard to the collection and the processing of information, it seems logical that it is easier for multiple companies than it is for an individual company to handle this process, which is why collaboration networks are of immense importance for innovation activities (Ahuja 2000). Thus, interorganizational collaborations can be said to be a method for effectively tackling some of the complexities and challenges that are accompanied by creating innovation (Alexiev, Volberda und Van den Bosch 2016) and are one of the most important sources for getting access to external knowledge (Powell, Koput and Smith-Doerr 1996). Moreover, well-working collaborations are likely to result in the acquisition of new skills learned from the partner organization, which positively impacts the organization's general position (Hamel 1991).

The benefit that results from a variety of interorganizational networks and collaborations is also confirmed by several studies. For example, a study of biotechnology start-ups found that the number of collaborative relationship formed by an organization was positively related to a successful performance defined in terms of its innovation output (Shan, Walker and Kogut 1994). Additionally, a study conducted by Faems, Van Looy and Debackere (2005) concluded that "the more firms engage in a variety of different interorganizational collaborations, the more likely they are to create new or improved products that are commercially successful". (p. 248). These studies confirm the importance of external connections and interorganizational collaborations with regard to a company's innovative performance.

Furthermore, established relationships with a variety of organizations increase a company's chance to solve specific problems that are difficult or even impossible to solve by only relying on internal resources through identifying and contacting those organizations that might possess the relevant resources (Freeman 1982). Such a resource could be general or in-depth knowledge about issues that pose a challenge for the organization in need for external help. Various researchers highlight the immense importance of knowledge within the innovation process, which is based on the fact that innovation results from combining existing knowledge in new ways (e.g., Hull, Coombs and Peltu 2000; Adams, Bessant and Phelps 2006; Amabile and Pratt 2016; Cropley and Cropley 2010; Fagerberg 2005; Lundvall 2004; Tidd and Bessant 2009). It seems logical that the knowledge possessed by several firms exceeds the knowledge possessed by only one firm. More and diverse knowledge results in greater

possibilities to combine it in new ways. Laursen (2012) extended the statement that companies should strive for new knowledge from external firms by suggesting that this search for knowledge should be both local and non-local in order to derive greater benefit from the external search for new knowledge. The just presented importance of knowledge for innovation indicates that organizations should be concerned about its management which includes gaining access to diverse knowledge sources, collecting information from accessible sources, and most importantly, using this newly obtained information in a beneficial way. Sharing knowledge and ideas within interorganizational collaboration projects is of immense importance for creative problem solving, which is why processes that encourage open communication, such as idea generation, should be an inherent part of collaboration projects (cf., Adams, Bessant and Phelps 2006).

Before choosing to establish an interorganizational collaboration, a company needs to decide whether or not it wants to internally develop the technologies it desires, which can be accompanied by high financial expenditures (Hamel 1991). These can be avoided by the decision to not exclusively rely on internal resources, but rather making use of external resources through collaborating with relevant companies. Reducing the expenses of technological developments is only one of the several benefits that result from networking and interorganizational collaborations. Even though some of the benefits have already been mentioned in this section, they will be listed again in order to provide the reader with a complete overview about the main advantages of collaboration projects. One of the most commonly mentioned benefits of interorganizational collaboration is gaining access to usually unavailable resources through exchange and sharing processes with one's collaboration partner. Thus, collaboration projects provide collective efficiency by having two or more companies that complement each other with regard to the resources they possess, which enables them to improve their innovation performance (Tidd and Bessant 2009; Berg, Duncan, and Friedman 1982; Richardson 1972; Arora and Gambardella 1990). Moreover, collaborating firms can reduce both the risk and costs for the entry into new markets. It can be said that innovation networks generally enable companies to share risks which allows for the consideration of projects that an individual firm would not be able or willing to invest in (Tidd and Bessant 2009; Alexiev, Volberda and Van den Bosch 2016). A further benefit of interorganizational collaborations is the facilitation of scale economies; both in relation to production and research, since larger projects are likely to generate more new knowledge compared to smaller projects. Additionally, collaborations can result in time savings with regard to the development and commercialization of new products. Not only provide collaborative linkages access to otherwise inaccessible resources, they also enable enterprises to be stimulated by gaining new impressions and experiences, as well as by the creation of new combinations of diverse knowledge originating from different areas. Finally, interorganizational projects can result in knowledge spillovers and shared learning. This requires that the participating organizations openly share their knowledge, experiences and ideas, and that the collaboration members are willing to engage in activities that include new thinking approaches and experimentation (Tidd and Bessant 2009; Ahuja 2000).

Based on the fact that interorganizational collaborations can provide different benefits for its participants, it makes sense that such projects are established for different reasons. Generally, it can be said that collaborations are arranged for the purpose of solving a specific problem or task (Tidd and Bessant 2009) whose extent can vary considerably. This is due to the fact that an organization's innovation strategies usually refer to both relatively small projects, such as the improvement or further development of already existing technologies, while also focusing on the development of completely novel technologies and competencies

(Wheelwright and Clark 1992). It is therefore that a main distinction with regard to collaboration types is made between exploitative and explorative collaborations. While the former mainly focuses on efficiency in relation to the improvement of competencies that are already possessed by the company, the latter strives for the creation of something novel, and thus relies on the participants' motivation and ability to share their knowledge and ideas (Faems, Van Looy and Debackere 2005). With regard to knowledge, Un, Cuervo-Cazurra and Asakawa (2010) stated in their paper that the final outcome of collaboration projects established for R&D reasons is influenced by both the breadth of knowledge that is offered by the partner and the ease of access to the partner's knowledge. They found out that the latter, rather than the former, is a key determinant for the success of R&D collaboration projects arranged for product innovation. That access to knowledge highly influences the collaboration's outcome also explains why R&D collaborations with competitors are less successful with regard to product innovations. It is assumed that competitors rather tend to share a minimum amount of knowledge compared to other collaboration partners due to the fact that they are afraid of initiating unintended knowledge spillovers that might be beneficial beyond the actual collaboration for the competing partner (Hamel 1991). A further distinction that should be made with regard to R&D projects refers to the term novelty. While some product development plans might be perceived as novel from one party, they do not have to be perceived as such from other parties. Due to the fact that explorative collaborations that aim at developing a new product for the market require more extensive inputs compared to projects that develop products that already exist on the market, but are new to the firm in charge of the development, projects that strive for the creation of products that are perceived as novel by the majority of market actors are more likely than less novel ones to be executed via interorganizational collaborations (Tidd and Bessant 2009). Dependent on what the collaborating companies agreed on, the chosen partner can be either involved in only some of the innovative activities that exist in the entire innovation process from search mechanisms to the innovation's implementation or be completely integrated into the entire innovation value chain (Love, Rope and Bryson 2011; West and Bogers 2014; Hansen and Birkinshaw 2007).

Collaborations with regard to frequency and type are also dependent on the sectors the participating companies are situated in. In sectors that continuously change and develop, such as the information and communication technology sector, different kinds of collaborations are established more frequently compared to more mature sectors that are characterized by less and slower changes. They also vary in the type of collaboration that is arranged and in the resources the organizations strive to get access to. Immature sectors are more likely to collaborate with others for the purpose of exploration, while mature sectors focus more on exploitation activities (Tidd and Bessant 2009; Hagedorn 1993). Dependent on the purpose a collaboration should be established for, the chosen partners can be different. A company can decide to work together with, for example, customers, suppliers, lead users, universities or other research centres, or even existing or potential competitors. Moreover, collaborations do not have to include only two parties. Dependent on the project's purpose, it might also make sense that more than two different partners participate in the project (Faems, Van Looy and Debackere 2005).

Due to globalization processes, new possibilities that are created through the existence of the internet and increasing digitalization, collaborations can also be set up between partners that do not have the possibility to regularly meet each other physically. This is especially beneficial for building up relationships with non-local partners (Tidd and Bessant 2009). Nevertheless, one should bear in mind that projects including geographically distant

partners might face different challenges to overcome potential process losses, such as communication or group formation issues (Dettmann, von Proff and Brenner 2015).

However, one should note that it is not solely those collaborations that include spatially distant partners that might be challenging, but rather every kind of project that includes different parties. Due to the fact that existing challenges are not handled well in all collaborations, it should be pointed out that the establishment of these does not provide a guarantee for reaching the desired outcome (Faems, Van Looy and Debackere 2005). Thus, the collaborations success varies from project to project and is dependent on different factors, such as the agreement on a common goal, since divergent aims and objectives are likely to cause conflict. Moreover, problems could also arise through not having established clear rules with regard to the project's control and the ownership of the produced ideas and products. Finally, a potential risk that is accompanied by collaborations are undesired knowledge spillovers, which is especially relevant when working together with competitors (Tidd and Bessant 2009). At this point, emphasis should once again be put on the importance of knowledge exchange in relation to successful collaboration processes, since this can be said to be one of the main reasons for these kinds of projects. To what extent an organization gains access to its partner's knowledge and skills also determines the potential learn effect of that organization. However, it should be highlighted that simply having access to novel knowledge and skills possessed by one's collaboration partner does not automatically result in an improvement of a company's competencies. In order to benefit from the newly accessed skills in the long term, a company needs to also internalize these skills. Only under the condition of internalization of one's partner's knowledge and skills, the newly acquired competences can create value for the company outside of the actual collaboration purpose through applying these to other intraorganizational activities (Hamel 1991).

In sum, collaborations can be an effective strategy to tackle a specific problem or task that exists within a company and solve it through combining resources, information, knowledge and skills that are possessed by the collaboration participants. New combinations of internal and external inputs might result in creative and innovative outcomes, which positively influences a company's competitive position. Reasons for the establishment of collaborations vary. However, it can be generally said that the main reason for collaborating with different external partners is to gain access to different kinds of resources (e.g., machines, technologies, knowledge) that normally would not be available to the company. Thus, collaborations facilitate exchange processes that in the optimum case result in shared learning with and from one another. It becomes apparent that access to knowledge and skills is an important determinant for the outcome and success of collaboration projects. However, it should be pointed out that an organization can only profit from these newly accessed competences outside of the actual interorganizational project and in the long term if these are internalized. Collaborations may vary considerably in terms of scope and content. They can be established for either carrying out only specific activities within the innovation process or for completely collaborating throughout the entire innovation value chain. The duration of a collaboration can also vary and depends, inter alia, on the problem the collaboration participants aim to solve and the financial resources that are provided for finding a solution. Furthermore, with whom an enterprise wants to collaborate is highly dependent on the project's purpose, which can roughly be divided in the two categories exploration and exploitation. Moreover, the characteristics of the sector a company is operating in (such as the sector's maturity) highly influence whether a collaboration is established for exploration or exploitation reasons, and also influences the frequency of interorganizational projects. Generally, collaborations are said to bring several benefits, such as the reduction of expenses

and risks, economies of scale, time savings, new stimuli, knowledge spillovers, and shared learning. Nevertheless, one should bear in mind that these benefits, and hence a successful outcome, is not automatically reached through the arrangement of a collaboration, and that both processes and outcomes vary significantly between different cross-organizational projects. In order to reduce process losses and achieve the desired success, upcoming conflicts and challenges throughout the entire collaboration need to be handled appropriately.

With regard to this thesis, it is focused on interorganizational collaboration that are established for the reason of exploration and creativity. This means that emphasis lies on those processes that facilitate the exchange of knowledge and information (i.e., mental resources) between the collaboration participants, in order to combine these in new ways. There are no restrictions with respect to the sectors the participating companies are situated in, the duration of the project, or the types of partners that are involved in the creative collaboration.

#### 4.7. Group Creativity

Recall from section 4.2. that creativity and innovation arise through the combination of existing knowledge in new ways. Considering now that a company sets up an interorganizational collaboration to gain access to and exploit external knowledge and skills in order to combine these with internally possessed competences, it appears that interorganizational collaborations strive for the exploitation of group creativity. Due to this, this section serves the purpose of providing the reader with an overview about the existing assumptions about group creativity which is sometimes also referred to as creative collaboration.

As previously mentioned, the permanently changing market environments require organizations to continuously innovate in order to secure the organization's survival. Therefore, an organization and its employees must possess current knowledge about any topic that is relevant for its business. However, due to the fact that it is simply not possible anymore for an individual to possess all the relevant information, knowledge and skills that are necessary for developing innovations, organizations increasingly use work groups for the execution of innovation projects (Nijstad and Paulus 2003). Despite the importance of group creativity for innovation, research on this topic is less frequently conducted compared to research on individual and organizational creativity (James and Drown 2012).

One of the most common methods that is used for creative collaboration is group brainstorming which was promoted by Alex F. Osborn (1963). However, results of studies undertaken on the method's efficiency are mixed. Some research concluded that even when the four brainstorming rules (i.e., do not criticize, focus on quantity, say everything you think of, and build on others ideas (Osborn 1957) are followed individuals outperform groups; in other words, individually generating ideas and being creative results in a greater performance than executing the same creative activities in a group (e.g., Paulus and Nijstad 2003; Mullen, Johnson and Salas 1991). Nevertheless, it should be pointed out that research clearly showed that groups that follow the brainstorming rules generate more ideas compared to groups that do not (Parnes and Meadow 1959).

Researchers found that the weaker brainstorming performance of groups compared to the same number of individuals has five reasons. The first one is evaluation apprehension. Brainstorming participants are afraid of that their ideas and opinions are negatively evaluated (Paulus and Yang 2000), which is why they rather say nothing or only share those thoughts that they have in common with the other brainstorming participants, which leads directly to

the second reason. A well-known problem occurring within groups is that the participants tend to share knowledge and experiences that they have in common (Stasser 1999), although group brainstorming and its desired creative outcome rather relies on sharing unique information to provide the group with novel input. The third reason that results in individuals outperforming groups with regard to brainstorming activities is social loafing. Dependent on the size of the group and its common procedure to share knowledge and ideas, individuals might not feel responsible for the group's progress and might not be sufficiently motivated to put effort in the group task. Therefore, they rather participate passively than actively and rely on the contributions of the other group members (Karau and Williams 1993; Kerr and Bruun 1983). A further issue with regard to group brainstorming is that the first idea that is expressed constitutes an important determinant for the group's overall performance. Due to social comparison processes, individuals tend to adjust the quality of their contributions to those of others, which is why groups whose first contribution is characterized as being weak are likely to maintain this low level of performance throughout the entire process (Paulus and Yang 2000). The final reason for the poor performance of groups compared to individuals refers to production blocking. This is caused by the fact that group members cannot immediately share their ideas with the group when someone else is talking, which negatively impacts the group's performance (Diehl and Stroebe 1991; Lamm and Trommsdorff 1973).

Despite these five challenges, many researchers stated that groups have a high creative potential due to the fact that working with others and carefully listening to their ideas enables access to new knowledge, naturally causes cognitive stimulation, and challenges one's habitually used patterns of thinking (Brown, et al. 1998; Paulus, Larey and Dzindolet 2000; Byrge and Hansen 2014). And indeed, a study conducted by Paulus and Yang (2000) confirmed that the group's creative performance can be enhanced if certain conditions are met. These conditions include, on the one hand, careful attention to other group members' contributions and, on the other hand, incubation time which describes the participants' possibility to process the new obtained information and integrate it in one's own thought processes. Even though not explicitly stated in the paper, it can be assumed that consciously using other people's shared knowledge for cognitive stimulation by carefully attending others' ideas and leaving time for incubation, and strongly encouraging the group members to share their all their thoughts (and especially their initial ones), will reduce the problem of focusing on information that the participants have in common and will result in an exchange process that to a greater extent includes unique knowledge and experiences. Moreover, the study by Paulus and Yang (2000) indicated that group-writing procedures, which is also referred to as 'brainwriting', improved the group's performance by eliminating the before presented issues with regard to evaluation apprehension, social loafing, and production blocking. The group-writing technique describes a procedure in which the brainstorming participants write down all their ideas on a paper rather than saying them out loud. This enables them to permanently write down all their ideas rather than waiting for their turn as it is the case when orally expressing their opinions. Moreover, through working individually at the beginning of the session and not being influenced by other people's ideas, the previously explained problem of social comparison processes is solved. In addition, the fact that the group members are expected to individually produce something overcomes the negative effect of social loafing. The subsequent exchange of the papers with the generated ideas additionally enables the participants to take their time to carefully read and internalize each idea. Finally, evaluation apprehension is reduced through passing on written ideas rather than orally expressing one's opinion in front of everyone. Due to the study's promising results that brainstorming groups using the writing technique performed better than the same number of individuals that were

not allowed to change their ideas, Paulus and Yang (2000) emphasised the importance of group ideation processes for creativity and innovation within organizations. Moreover, based on the results that group-writing procedures can overcome the negative effects of oral brainstorming by avoiding interpersonal contact, it makes sense that there is an increasing interest in electronic brainstorming to improve the group's creative performance (cf. Dennis and Williams 2003).

As it was briefly mentioned in section 4.3. about organizational creativity, group creativity which also has an impact on organizational creativity, is influenced by various factors. It is for this reason that the literature about group creativity is quite diverse, since creative collaboration researchers are concerned with a high number of different factors that impact group creativity. Generally, these factors can be divided into two broad categories. Firstly, internal group processes and secondly, contextual and environmental factors that influence these processes (Paulus and Nijstad 2003). Such a factor is the group composition. The group's composition in relation to its diversity determines the group's creative potential (Nijstad and Paulus 2003). It is said that groups being composed of people that differ with regard to their abilities, skills, knowledge, and professional backgrounds possess more creative potential than do groups with more similar members. This is due to the possibility to exchange more diverse ideas and opinions which enhances creative thinking. Group diversity can even be seen as one of the key factors for creative collaboration since the main purpose of its establishment is to provide people with access to new knowledge and stimuli in order to create something novel (Nijstad and Paulus 2003; Paulus 2000).

Nevertheless, even though a diverse group might possess high creative potential, this does not automatically mean that this potential is realized. Besides the positive implications that diversity has on the participants' cognitive processes, it is also associated with several negative consequences for the group, such as lower levels of cohesiveness, higher levels of emotional conflict, low member satisfaction and less identification with the group (e.g., Jehn, Chadwick and Thatcher 1997; Jackson et al. 1991; Levine and Moreland 1998; Milliken et al. 2003). All these consequences negatively impact the group's process and performance and result in circumstances that make it impossible to fully exploit the existing creative potential of the working group. It is therefore that different measures should be taken to ensure that these process losses are reduced to a minimum (Nijstad and Paulus 2003). Such measures include the creation of a positive group climate which is characterized by an individual's feeling of psychological safety. This feeling describes the belief that one's group will always react positively to one's contributions (Edmondson 1999). This does not mean that the participants are not critical towards each others' suggestions but rather that this criticism is expressed in a way that indicates mutual respect and never harms another person or makes him or her experience discomfort (Barsade, et al. 2001). Thus, feeling psychologically safe impacts the participants' behaviour and makes them more likely to take interpersonal risks by openly share their thoughts; even those ones that in the absence of psychological safety would not have been expressed due to an individual's fear of being negatively evaluated. It is therefore that the experience of psychological safety is said to be conducive to group creativity (Edmondson 2002; West 1990). However, it should be pointed out that many of the factors that impact psychological safety can only be partially influenced by an organization. These factors include for example the team leader's behaviour or the participants' personalities. Finally, the power over the group climate is held by the group participants and their individual decisions about how to communicate and interact with each other (Edmondson and Mogelof 2012).

Various other social factors and group member characteristics affect the generation of ideas in groups, and thus the realized group creativity. One of these is an individual's score on social anxiety. Camacho and Paulus (1995) concluded in their paper that groups with members high in social anxiety achieve poorer brainstorming results compared to groups with members low in social anxiety. Moreover, personal motivation, openness to experience, and high levels of cognitive ability are said to enhance the creative performance of a group (Paulus, Nakui and Putman 2012).

It appears logical that contextual and environmental factors that influence the processes within the group also impact the group's creativity. This includes for example the degree of organizational support for the creative collaboration and the presence of a trained facilitator (West 2002). Furthermore, the task characteristics, including both the demands on the group members and the opportunities they create for the group, are said to be of immense importance for the group's creative performance. West, Sacramento and Fay (2012) express this importance in the following way: "The task a group performs is a fundamental influence on the work group, defining its structural, process, and functional requirements—the people in the group, their roles, how they should work together, and the nature and processes of the tasks they individually and collectively perform" (p. 143). Demands originating from the nature of the task can for example influence the development of group cohesion, facilitate clearly structured interaction processes between the members, communicate a clear shared objective, and sharpen the group's task focus, which are factors that are all said to be conducive to an effective and creative team performance (cf., Paulus, Nakui and Putman 2012; West, Sacramento and Fay 2012; Byrge and Hansen 2014).

However, it should also be noted that other authors emphasise the importance of an environment that is neither demanding nor constraining for the emergence of creative behaviour (c.f., West 2002; Amabile 1999). Finally, current research highlights the complex and multifaceted nature of constraints which leads to different effects on one's creativity depending on the type of demand or constraint one (Caniëls and Rietzschel 2015). If the reader would like to obtain more information about the relationship between constraints and creativity the paper written by Caniëls and Rietzschel (2015) is highly recommended.

Finally, because this section several times mentioned that different creative performances were compared, or that the absence (or presence) of certain factors results in a poorer creative performance compared to the presence (or absence) of these, one should also be provided with the knowledge about how creative performance is actually measured. For the purpose of determining a group's performance which is aimed at producing creative outcomes there are five different evaluation criteria. These are fluency, flexibility, originality or novelty, usefulness, and elaboration. Fluency refers to the total number of ideas generated using different thinking strategies and stimuli. Novelty, or originality, concerns the uniqueness of generated ideas (Runco 1999). Flexibility refers to the generation of ideas from different categories, meaning that produced ideas are distinct in terms of their applicability and principle for solving the problem (Guilford 1968). Usefulness is concerned with the outcome's practicality in relation to the task that needed to be solved (Ward 2008). Elaboration, finally, refers to the extent to which an idea has been further developed both by the idea generator and by other participants (Byrge and Hansen 2014; Guilford 1967). Thus, the group's creative outcome (e.g., all the ideas that have been generated through an ideation process) can be evaluated by using these five criteria. They can furthermore help the group to identify weaknesses within their process and enable them to work towards the improvement of one specific feature.

In conclusion, group creativity is of enormous importance for any kind of innovation activities by exploiting the participants' diverse skills, experiences, and knowledge, when solving the task at hand. Even though there is much evidence that personal interactions can inhibit the generation of creative ideas in groups, results from other research projects showed that group creativity can be enhanced and that groups can even outperform the same number of individuals if certain conditions are met. It is difficult to predict the final outcome produced through creative collaboration based on the fact that the group's output is dependent on a multitude of factors. It is therefore that one needs to consider the group context in order to understand why some groups perform better than others. The work group cannot be seen as an independent unit that operates in a vacuum, but rather as a social entity that is highly influenced by the individuals it is comprised of, their interactions and the resulting group processes, as well as by its external environment. It can be summarized that in order to increase the group's performance, the participants of work groups should experience psychological safety to openly share their ideas and thoughts without the fear of being negatively evaluated by group members. Nevertheless, this positive group climate should still allow for critical expressions for the purpose of using task related conflict as a method to encourage creative thinking. However, one needs to be aware of that different perspectives that initially only refer to the task might also result in emotional conflict, which negatively impacts group creativity.

#### *4.7.1. Principles for Enhancing Creativity in Groups*

Due to the fact that the creative performance of groups is influenced by a multitude of factors, this section serves the purpose of providing an overview about different principles that are developed to reduce or even eliminate the negative effects of these factors and, hence, realize a group's creative potential.

The first four principles developed by Nijstad, Rietzschel and Stroebe (2012) result from the identification of two important determinants for group creativity, which include, on the one hand, the mental resources (i.e., information, skills, abilities, expertise) that the participants possess, and on the other hand, group processes that cause specific resource combinations and therefore are essential for the final group performance.

The first principle of group creativity is the **creative potential principle**. It is argued that the group's potential creativity is determined by the task relevant resources that the group members bring to the group. With regard to this, group diversity plays a significant role. This is due to the fact that a group composed of individuals that differ with regard to their task related skills, knowledge and experiences enables the group members to mutually complement each other when solving the task. It is therefore that task related diversity within groups is associated with higher creative potential compared to more homogeneous groups. However, it is assumed that there is an optimal level of diversity which differs dependent on the task. Groups that are both below and above the optimal level of diversity show less creative potential compared to groups that have an appropriate balance between intragroup diversities and similarities. Nevertheless, even if this balance is achieved, this does not automatically lead to the full exploitation of the group's potential, because diversity can be accompanied by several affective processes that have a negative impact on the group's creative performance. The degree of exploitation depends on various group processes. Some of these will be explained in more detail when the three further principles are presented (Nijstad, Rietzschel and Stroebe 2012).

The second principle of group creativity is the **effective sharing principle**. It is concerned with the necessity of group members to contribute to the task's progress by openly share their ideas, thoughts, and knowledge. Effective sharing processes must occur, because they are necessary for seizing the potential positive effects of group diversity. Whether or not an individual contributes to the task depends on both his or her motivation and ability to do so. Motivation, in turn, highly depends on the group climate. Ability, on the other side, requires the regular provision of opportunities to actually exchange ideas and knowledge. This could be done through, for example, face-to-face meetings where ideas are exchanged orally, but sharing processes can also take the form of exchanging written notes or using digital platforms for communication. Special emphasis should be put on the sharing of unique knowledge and ideas. As previously mentioned, groups tend to exchange information that they have in common, but it is only through the combination of the participants' unique knowledge that particularly valuable ideas emerge (Stasser and Birchmeiner 2003). Stewart and Stasser (1995) argue that the likelihood of sharing unique insights is increased when the group members are aware about specific areas of expertise. Furthermore, minority positions within the group should be valued and those that hold such positions should openly communicate them. This is based on the positive effect that different perspectives have on the group processes, since they cause a more detailed analysis of the problem which might lead to new insights. Finally, Nijstad, Rietzschel and Stroebe (2012) noted that the group processing space is limited. Due to time constraints, the possibilities for exchange processes are not infinite. It is therefore that groups should use this processing space effectively. This can be done by both using communication methods that allow for time savings and by group members mutually recognizing their areas of expertise. The latter facilitates time savings through knowing exactly which group members possess the required information, and therefore enables one to directly contact the appropriate person (Nijstad, Rietzschel and Stroebe 2012).

The third principle of group creativity is the **accessibility principle**. Effective sharing does not automatically result in enhanced group creativity. It is necessary that the shared knowledge is processed by the group members. Processing includes that one carefully attends to the shared ideas which facilitates one's access to related knowledge. With regard to this, it is important to note that one should differentiate between available and accessible knowledge (e.g., Tulving and Pearlstone 1966). While available knowledge simply refers to all the knowledge that potentially is at one's disposal, accessible knowledge is this knowledge that we are able to retrieve and use. Whether or not we have access to knowledge is highly dependent on the context in which one tries to retrieve it. This is exactly what the accessibility principle makes use of. By paying close attention to other people's contributions, one permanently receives new stimuli that enable the access to related knowledge. This, in turn, leads to ideas that without the effective sharing and processing of information would not have been generated. Thus, closely attending to others' contributions can be stimulating and has positive consequences for idea generation. Still, there are also studies that demonstrate the negative effect of paying attention to examples or other people's ideas by leading to cognitive adjustment and conformity within the group. This results, however, seem to apply especially for homogeneous and less for diverse groups (Nijstad, Rietzschel and Stroebe 2012).

The fourth and final principle presented by Nijstad, Rietzschel and Stroebe (2012) is the **effective convergence principle** which is important for the convergent part of the creative process. Creativity within groups often includes both divergent and convergent processes. Usually, the working group starts with the generation of ideas, for which the before presented effective sharing and the accessibility principle are crucial. At one point, the group should

switch from the divergent to the convergent process and start to select those ideas that should be further developed. It should be emphasised that the group's agreement about and selection of ideas they would like to continue working on determines the final outcome of the group process. It is therefore important that the group converges on the most promising ideas, since this convergence is crucial for the group's final creativity. In order to select a promising idea this idea first needs to be generated. Due to the fact that quantity in relation to ideation processes is said to be strongly correlated to quality (e.g., Diehl and Stroebe 1987), the group should try to generate as many ideas as possible before continuing with the selection process. Nevertheless, even though high-quality ideas are generated this does not guarantee that these ideas are selected by the group. Therefore, it is highly recommended to make use of an effective selection process by having explicit selection criteria and evaluating all the generated ideas on the basis of these criteria in order to avoid premature decisions and unsatisfactory results (Nijstad, Rietzschel and Stroebe 2012).

These four principles of group creativity are of high importance for explaining how the creative potential of a group can be improved and how this potential, in turn, can be realized to finally receive a creative outcome that is both novel and useful (Amabile 1996). They can therefore also be found in the generic model of group creativity (*Figure 4.7.1.*). Bernard A. Nijstad and Paul B. Paulus (2003) provided this framework in order to understand group creativity as the functioning and performance of the group which, in turn, is determined by the combination of contributions. Group functioning consists of three elements, which include group members, group processes, and group contexts. The first element, the group members, are important in relation to the group's creative potential. As it is known from the creative potential principle, the diverse task relevant resources that the group members bring to the group determine the group's creative potential. However, the existing potential also needs to be realized in order to yield a creative outcome, which in turn depends in the second element, the group processes. Finally, these processes are highly influenced by the third element, the group contexts.

*Figure 4.7.1.* illustrates the relationships between the different elements and the before presented principles. The individual level on the left side of the figure includes the resources (i.e., information, skills, abilities, and expertise) that are available to an individual, the processing of these resources and, finally, the produced output originating from the processed resources. In addition to the resources that are already at the disposal of an individual, these resources are supplemented through activities outside of the group context (Arrow 1). At the group level, which is situated in the middle of the figure, the group members' individual contributions are combined. This is referred to as the group information-processing space. The possibilities for combinations of contributions are dependent on the exchange of information between the individuals. The more effective the sharing process, the more potential possibilities for generating ideas are created. Arrow 2 represents the contributions of the individuals and is highly related to the effective sharing principle. When ideas are shared, their stimulating effect for a group member depends upon the extent to which this member pays attention to these ideas. Only under the condition that contributions from other group members are attended to carefully, individuals can supplement their existing resources (Arrow 3) and gain access to available related knowledge (i.e., accessibility principle). The combinations of contributions cause the group to respond to these. At one point, the group is required to make a decision and select those ideas that should be further developed or even select the final idea. The group response is influenced by the decision or selection procedure with regard to the combination of contributions (Arrow 4). As it was explained with regard to the effective convergence principle, it is important that the group converges on the most

promising ideas through making use of effective selection methods. At the end, it is this decision that determines the final outcome of the group process, and therefore also determines to what extent the creative potential in the group has been exploited. The chosen idea(s) or plans are implemented (Arrow 5). Finally, it is also important to note that the individual group members, the entire group, and therefore also the group processes are highly dependent on the group's internal and external contexts. Thus, factors such as, group climate, group norms, organizational climate, the group task, etc., strongly impact the realized creative potential of the group. This is why one will never gain a holistic understanding about a group's creative performance if one is only considering the group itself without its external influence factors.

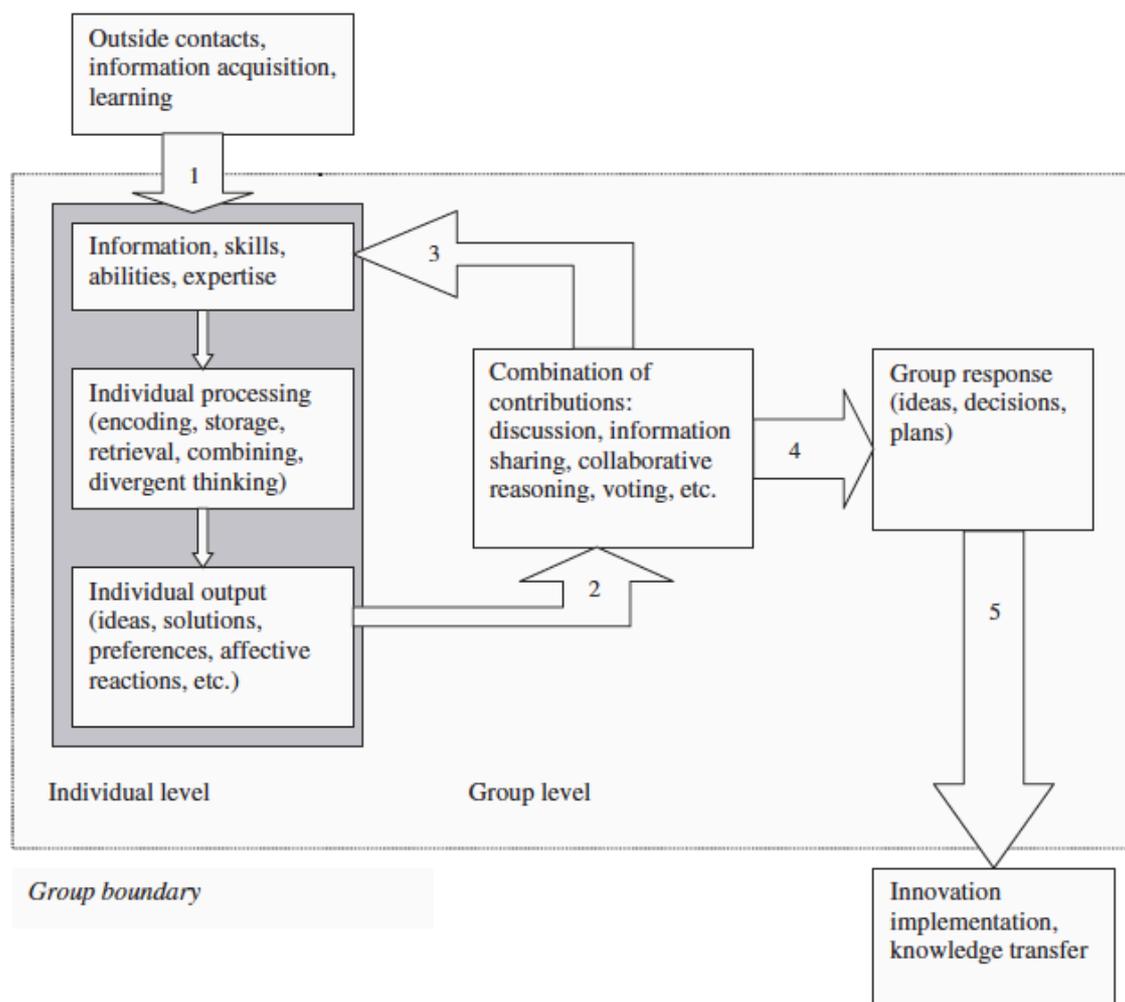


Figure 4.7.1.: A generic model of group creativity.

Source: Nijstad, Bernard A., and Paul B. Paulus. 2003. "Group creativity: Common themes and future directions." In *Group Creativity: Innovation through Collaboration*, (Eds.) Paul B. Paulus and Bernard A. Nijstad, 326-339. Oxford: Oxford University Press.

Further principles for enhancing group creativity are provided by Christian Byrge and Søren Hansen (2014). Due to the fact that they define creativity as "the unlimited application of knowledge" (p. 15), their four developed principles serve the purpose of enabling this application. The authors emphasise that being creative means to be able to use one's available

knowledge without being limited by one's social identities (e.g., profession or culture). It is therefore important to completely be oneself and remove the social mask that everyone is wearing. Only if the environment enables one to do so when being together with other people, creativity can emerge.

Byrge and Hansen (2014) define knowledge as "everything that can give rise to thoughts, ideas and action" (p. 17). They also highlight the importance of a broad knowledge base for creativity. This is comparable to the previously presented principle of creative potential. It was argued that the more task relevant resources the group members possess, the higher the group's creative potential.

The first principle of creative behaviour is **horizontal thinking**. Horizontal thinking, often referred to as divergent thinking, describes a cognitive process that allows an individual to broaden the relevant knowledge base to the task at hand by making use of knowledge that is in principle related to this task. Rather than seeing the problem to solve only within its context, one tries to see the principle behind this problem and tries to think of other areas where this principle is used. To better understand the meaning behind this, an easy example will be provided. Imagine you are working in a bar and all the fridges that are normally used for cooling down the beer are broken. It is Friday afternoon and you quickly need to solve this problem before the first guests arrive. The principle behind this problem is to cool down things. This makes you think about the fishing trip you made last weekend where you used ice to make sure that the caught fish stays cold. This horizontal knowledge can now be applied to the original problem by simply using ice to cool down the beer. Thus, taking the problem out of its context and bringing it to a more abstract level, enables the access to horizontal knowledge (i.e., knowledge that seems to be completely unrelated to the task at hand), and therefore also creativity thinking.

The second principle is **task focus**. In order to enable creative thinking, one needs to fully concentrate on the task at hand. It is very likely to people throughout a creative collaboration will experience mental and physical disruptions. Task focus requires to ignore these disruptions to be able to apply one's knowledge in an unlimited way. Anything that moves one's focus away from the task can be seen as obstacle to one's creativity. It is also for this reason that task focus requires one to remove the social mask and completely be oneself, due to the fact that one otherwise would be concerned about behaving in accordance to other people's or their own expectations, which results in a divided focus and limits the accessible knowledge. Task focus allows for creative presence and enables one to effectively use external stimuli to generate new ideas for solving the problem. Thus, one gains access to a broadened knowledge base when completely focusing on the task at hand. This principle is to some degree comparable to the before presented accessibility principle which also states that attention or focus on other people's contributions is important to increase the exploited creative potential of the group.

The third principle for enhancing group creativity is **parallel thinking**. This principle is highly related to the just presented task focus principle. Parallel thinking means that everyone in the group is working on exactly the same task. Whether activities are worked on individually, in pairs, in small groups, or with the entire group, being able to apply one's knowledge in an unlimited way requires everyone to do the same thing at the same time. Parallel thinking facilitates task focus by creating a strong shared focus of the group. Thus, this principle enables one to stay focused, which results in completely exploiting the group members' mental capacity.

Finally, the last principle for creative behaviour is the principle of **no experienced judgment**. This principle is especially important with regard to being oneself and removing

the social mask. Throughout creative collaborations one should never have the feeling of being negatively evaluated or generally judged in any way in order to enable creative presence. Even though it is likely that group members judge each other it is important that one never feels judged. Experiencing not judgment leads to a feeling of comfort and safety, which allows for creative behaviour, and thus for enhanced group creativity (Byrge and Hansen 2014). Even though not directly comparable, the principle of no experienced judgment is close related to the effective sharing principle. As previously explained, effective sharing is dependent on both one's motivation and ability to do so. The motivation is influenced by the group climate, which means that a positive group climate characterized by a feeling of comfort and psychological safety will increase one's motivation and makes it more likely that one openly shares one's ideas and thoughts.

In sum, the application of the 8 presented principles should lead to the total exploitation of a group's creative potential. Even though they might not seem to be similar at first glance, a more detailed explanation of the principles clearly showed the similarities between the principles developed by different creativity researchers. However, the effective convergence principle cannot be related to the principles and group creativity approaches by Byrge and Hansen, due to the fact that their principles only refers to divergent thinking activities in relation to creativity, while the principle of effective convergence refers to convergent processes. This exclusive focus on divergent processes becomes particularly apparent when considering their explicitly mentioned principle of horizontal thinking.

#### 4.8. An Introduction to Prejudice

Gordon W. Allport and his significant work 'The nature of prejudice' (1954) was the basis for most of the subsequent work in relation to the social psychology of prejudice. He made various assumptions and developed concepts about prejudice that did not lose their relevance throughout the years. Allport suggested that the development of prejudice underlies three different processes. These include cognitive, motivational, and sociocultural processes. He was the first researcher that emphasised the cognitive approach with regard to prejudice and argued that holding stereotypic beliefs and developing prejudice is an inevitable result of the way in which people process information they are exposed to. In relation to the motivational processes that underlie prejudice, Allport pointed to one's endeavours to achieve goals in relation to self-enhancement and material benefits. Finally, he argued that sociocultural influences, exercised by parents, friends, colleagues, and social norms, are of immense importance in relation to both the development and the maintenance of prejudice, and also constitute an important instrument to eliminate prejudice (Dovidio, Glick and Rudman 2005; Allport 1954).

While Allport defined prejudice as "an antipathy based upon faulty and inflexible generalization" (p. 9, Dovidio, Glick and Rudman 2005), these days, prejudice is not merely defined as antipathy towards people, but rather in terms of both positive and negative reactions towards people. Prejudice can be defined as an attitude towards people due to the reason that they belong to a specific social group (Brewer and Brown 1998). These attitudes are reflected in evaluations and affective responses to both entire social groups and to individuals that are perceived as members of these groups. Moreover, contemporary psychologists make a clearer distinction between attitudes towards and beliefs about social groups, which is why one needs to differentiate between prejudice and stereotypes. The latter

refers to beliefs and opinions that one holds about group members of different groups with regard to their characteristics, attributes, and behaviours (Hilton and von Hippel 1996). Finally, a third factor that should be mentioned with regard to prejudice is discrimination, which means that people are treated differently based on their affiliation to a specific social group (Sue 2003). Even though it is theoretically possible to distinguish between these three concepts, in practice, stereotypes, prejudice, and discrimination often overlap, which makes it difficult to clearly separate them from each other. Moreover, they have a complex relationship, due to the fact that the existence of one factor might result in the emergence of another, but only if certain conditions are met. For example, an individual being aware of stereotypic beliefs is not automatically a prejudiced person (Kite and Whitley 2016). This can be explained through differentiating between stereotype activation and stereotype application (see chapter 5). The former refers to “the extent to which a stereotype is *accessible* in one’s mind” (Kunda and Spencer 2003, p. 522; italics added), and the latter is “the extent to which one *uses* a stereotype to judge a member of a stereotyped group” (Kunda and Spencer 2003, p. 522; italics added). While stereotype activation without application does not lead to prejudice, stereotype application can be equated with holding prejudice, due to the fact that one judges people because of their affiliation to a specific certain group, which is comparable to an evaluation of these. Evaluations, in turn, as mentioned above, are attributable to the attitudes (i.e., prejudices) that one has towards members belonging to a specific social group. Individuals tend to activate and apply stereotypes especially to people they do not know. If one gets to know another person better, it is likely that one recognizes the unique characteristics about this person. This causes that one starts to see this person as a unique individual, rather than as a member of a social group, wherefore stereotype application seems inappropriate (Kunda and Thagard 1996). Once a stereotype is applied, it is influencing one’s behaviour towards members of the stereotyped group. In addition, using stereotypes can be accompanied by biased interpretation about interactions with stereotyped group members. Moreover, the application is likely to influence our memory about stereotyped people’s appearance and behaviour due to the fact that using stereotypic beliefs affects the way in which one processes and stores information. These biased perceptions about these people strongly impact one’s evaluations and behaviours towards them. However, it should be noted that even though individuals usually have various stereotypes accessible in their mind, their application is not inevitable. Basically, the activation and use of stereotypes is the result of one fundamental process which forms the basis for any cognitive process and any theory with regard to prejudice. This process is referred to as categorization (Kite and Whitley 2016).

Categorization is a psychological term that describes the process of sorting people that appear to have specific characteristics, attributes and behaviours in common into mentally created categories, or groups. This categorization process allows for a simplification of one’s environment (Macrae and Bodenhausen 2000). Already at the beginning of the twentieth century, Lippman (1922) argued that one needs to simplify the world through creating categories and sorting people into these social groups, since one otherwise would be overwhelmed by all the information one is nearly permanently exposed to. It is only through categorization that one maintains the ability to interact with their environment. It is these created categories, or social groups, that constitute the origin of stereotypes, prejudice, and discrimination. By mentally creating social categories and assigning others, but also oneself, into specific categories, one starts to develop stereotypic beliefs about members of these groups, which might lead to prejudiced attitudes towards them. One’s interactions with

members of stereotyped groups are guided by the beliefs and attitudes one holds about these (Kite and Whitley 2016).

Sorting oneself and others into social groups facilitates the distinction between different groups. One of the most important differentiations of groups with regard to stereotypes and prejudice is the cognitive distinction that is made between ingroup and outgroup. This distinction forms the basis for the development of stereotypes and prejudice. An ingroup is this group that one assigns oneself to, which is why it is often referred to as 'us'. In contrast, outgroup is a term that is used to describe that one exclusively assigns other people to this group, but not oneself. Thus, psychologists label the outgroup as 'them', since one is not a member of this group. Making a concrete example, many sports fans talk about their favourite team in terms of 'we' and 'us', while using the expressions 'they' and 'them' when talking about competing teams. When using the terms ingroup and outgroup one should be aware about that labelling a group as an ingroup or an outgroup depends upon the perspective of the person they refer to. One person's ingroup might be another person's outgroup, and the other way around. In addition, one should also be aware of that research showed that social groups can be created from the most minimal conditions. Usually, when considering social groups, one thinks about characteristics, such as people's gender, age, ethnicity, physical appearance, or the sports team he or she supports. However, results of studies clearly indicated that minimal conditions that do not seem to be of any relevance for a person, are sufficient to cognitively create ingroups and outgroups, which is referred to as the minimal group paradigm (Kite and Whitley 2016). More details about this paradigm are provided in section 6.1.

A further important aspect that one should be aware of with regard to prejudice is the distinction between the contrary concepts of implicit and explicit prejudice. This differentiation is especially important when one aims at impeding and controlling prejudiced behaviour. Holding implicit prejudice means that one automatically and unconsciously activates stereotypic beliefs and attitudes about outgroup members when encountering them or only anticipating an encounter with them. This process occurs without one's awareness, which makes it impossible to consciously counteract the negative effects of this activation in form of biased perceptions and behaviours towards the members of an outgroup. Thus, evaluations and affective responses resulting from implicit prejudice cannot be controlled, even if one would like to become active. Explicit prejudice, on the contrary, is a term that describes one's intentional application of stereotypes, which means that one is well aware of one's prejudiced attitudes and consciously acts in a prejudiced manner towards people belonging to an outgroup. Explicit prejudice makes one actively recall stereotypic beliefs when interacting with outgroup members. Thus, while people with explicit prejudices are able to express their opinions about members belonging to stereotyped groups, those with implicit prejudices are not, due to the fact that they are not aware of having prejudices (Dasgupta 2009).

Research on the psychology of prejudice emphasised different aspects throughout the twentieth century. Even though they all appear to be important with regard to a more holistic and also historical understanding of research about prejudice, this thesis has its main focus on theories about intergroup relations, due to the fact that it refers to interorganizational collaborations. However, if the reader wishes to widen the knowledge base also with regard to other theories, chapter 1 in Mary E. Kite and Bernard E. Whitley's work 'Psychology of prejudice and discrimination' (2016) is recommended to get a preliminary overview about other existing theories.

It was between the 1960s and the 1970s that psychologists moved their focus away from intraindividual and interpersonal psychological processes that formed the basis for prejudiced attitudes and behaviours, and started to emphasize the importance of seeing individuals within their social contexts to explain the development of prejudice. The previously presented distinction between ingroup and outgroup gained in importance, due to the fact that prejudice was seen as resulting from the perception of intergroup competition. This means that one perceives one's ingroup to be in a competitive situation with the outgroup, and therefore develops negative attitudes towards members belonging to that group (Kite and Whitley 2016; Tajfel and Turner 2004). This assumption was based on the realistic group conflict theory. However, the theory missed to explain in more detail why and how one actually starts to perceive the social environment in terms of ingroup and outgroup. It is for this reason that the realistic conflict theory was followed by the development of the social identity theory. Both theories are explained below. Even though there also exist other theories with regard to intergroup relations, only realistic group conflict theory and social identity theory will be elaborated in the literature review. However, due to the fact that these theories constitute the basis for chapter 6, they will be further elaborated in that chapter together with other intergroup relation theories.

The first theory that was developed with regard to intergroup relations is the realistic group conflict by Donald T. Campbell (1965). The theory argues that competition for desired but limited resources between different social groups results in stereotypes and antipathies towards members belonging to the group that one is competing with. This effect occurs, regardless of whether the competition is real or only perceived. Competing for finite resources means that one's group's success is tantamount to the other group's failure. These conflicting interests create hostility between the competing groups. Increasingly negative attitudes resulting from competition with the outgroup are likely to occur, the more one perceives the outgroup as a threat to the achievement of the ingroup's goal. However, as it will be explained in section 6.3., the conflict and hostility between two groups that perceive each other as competitors can be reduced by making them work towards a common valued goal that can only be attained through the cooperation between members of the two groups (Schofield 2010; Campbell 1965). Besides more intense feelings of hostility towards the outgroup, intergroup competition results also in enhanced ingroup solidarity and a sense of connectedness with the ingroup (Tajfel and Turner 2004). Based on the theory, it appears logical that societies whose resources (e.g., power, prestige, wealth) are not allocated equally between social groups should be characterized by permanent competition between over- and underprivileged groups. Nevertheless, there is evidence that this is not always the case. There are situations in which people that belong to subordinate groups behave in a positive manner towards groups members of superior social groups that possess the scarce resources (Milner 1981; Giles and Powesland 1975). Thus, the just presented realistic group conflict theory is not applicable to every intergroup situation. Possible explanations are, on the one hand, that one's personal interest in the resources plays a decisive role with regard to whether or not one perceives outgroup members as potential competitors, and on the other hand, whether or not outgroup members possess these resources because the system, on the basis of social legitimisation processes, allocated them to these members. If one accepts that outgroup members are in a superior position, there is no reason that conflict between members belonging to different social groups arises. However, as soon as one challenges the social system and tries to gain a better and superior position, compared to the current one, conflict arises between the member of the subordinate group and those of the superior social group.

In conclusion, whether or not competition, and therefore also prejudiced attitudes, exists between two social groups depends upon their interest in the resources they potentially could compete for and their perception about the legitimacy of the current resource allocation. Additional information about the presented theory will be provided in section 6.3.

A further important theory with regard to intergroup relations is the social identity theory which was developed by Henri Tajfel and John Turner (Tajfel 1969; Tajfel and Turner 1986). The importance of the identification with one's ingroup and how this identification is maintained, which was relatively neglected in the realistic group conflict theory, receives greater attention through the social identity theory, and thus can be seen as a valuable supplement to the before presented realistic group conflict theory (Tajfel and Turner 2004). Originally, the researchers wanted to gain insights into the psychological processes that result in intergroup discrimination, in order to explain why people often perceive their own group as being better in comparison with other groups. They explained that this phenomenon emerges on the basis of two different processes, which include, firstly, one's cognition, and secondly, one's motivation. As previously mentioned, cognitive categorization of oneself and other people constitutes the foundation for differentiating between ingroup and outgroup. Besides this categorization process and one's identification with a specific social group, one strives for a positive self-image, which can be achieved through positively differentiating one's ingroup from an outgroup based on some personally relevant criteria. The reason for the need to perceive one's own group as better than other groups results from the social identity that one receives when becoming a member of a social group. Thus, one's individual or personal identity is supplemented through one or several group identities, which provides one with a self-identification in social terms, which means that anything that happens to one's ingroup will have an impact on oneself (Kite and Whitley 2016; Tajfel and Turner 2004). This causes that occurrences that are generally perceived as positive (e.g., one's own football team won against another team) will positively impact one's self-esteem, while the opposite is true for negative occurrences (e.g., one's own football team lost against another team). Social identity is something that describes 'who one is'. Tajfel (1972) explained social identity as "the individual's knowledge that he or she belongs to certain social groups together with some emotional and value significance to him or her of this group membership" (p. 31).

Further research conducted by Tajfel and his colleagues (1971) indicated that the distinction between ingroup and outgroup is accompanied by an important phenomenon, which is referred to as ingroup-favouritism. This means that members belonging to one's ingroup receive a preferential treatment compared to outgroup members. Evidence for ingroup-favouritism was found in several studies (see Turner 1983 for a summary of the results of relevant studies). Turner (1975) and Tajfel (1978) suggested that ingroup-favouritism, or ingroup bias, results from the mere act of self-categorization, which means that the categorization process makes an individual behave in a distinct manner compared to situations in which categorization does not take place. Based on the fact that categorization is said to be an inevitable process, since people otherwise would be overwhelmed by the information that they receive from their environment, self-categorization is an omnipresent phenomenon that occurs as soon as one person encounters at least one other person. This means also that ingroup bias influences people's behaviour as soon as they interact with people that are members of other social groups. Thus, intergroup interactions are characterized by permanently being impacted by ingroup-favouritism (Tajfel and Turner 2004).

With regard to social identity theory it can be summarized that categorising oneself into a specific social group makes oneself identify with this group. Due to the fact that one

generally tries to achieve and maintain a positive self-esteem, one strives for the creation of a positive image of one's group, since a positive group image is tantamount to a positive self image. This is done by comparing the ingroup with relevant outgroups, which in the optimal case should allow for positive distinctiveness of one's own group. Based on this comparing process that takes place, it can be concluded that the extent to which one perceives one's group as either positive or negative, is of a relative nature. This means that the evaluation of one's identity always depends on the respective group with which one compares the ingroup. The importance and consequences of the social identity theory are further elaborated on in section 6.1.

#### 4.9. Summary

This literature review constitutes the basis for the subsequent analysis about the relationships between group creativity, interorganizational collaboration, and prejudice. More specifically, the review is aimed at providing the reader with a fundamental understanding about the three topics in order to answer the following research questions:

- (1) How do prejudices arise in interorganizational collaboration projects?
- (2) How do these prejudices impact group creativity in ideation processes?
- (3) What are potential methods to avoid the prejudices' negative effects on group creativity in the ideation process?

With regard to the first question, the previous subchapter about the psychology of prejudice allowed for some insights into the cognitive and motivational processes that underlie the development of prejudice, and therefore both play a major role with regard to prejudice in interorganizational collaborations. It was explained that individuals sort people that appear to have specific characteristics, attributes and behaviours in common into different social categories, or groups, in order to not be overwhelmed by all the information that they are almost permanently exposed to. This simplification process is referred to as 'categorization'. Individuals assign not only others but also themselves to social groups. This self-categorization provides them with a social identity which means that an individual defines itself in social terms, and perceives itself as being part of a social entity, such as a family, a sports team, or an organization. It is this categorization process that makes an individual differentiate between the ingroup and outgroup. The ingroup is this group that an individual sorts itself into, while the term outgroup is used to describe social groups that an individual only assigns other people to, but not itself. The distinction between ingroup and outgroup constitutes the most important part in relation to prejudice. This is based on that the sorting process makes the individuals develop specific beliefs about different group members. Thereby, beliefs with regard to one's ingroup tend to be positive, while beliefs about outgroup members are likely to be negative. These beliefs, in turn, can result in certain attitudes towards the group members, and thus, result in prejudice. The differentiation between beliefs and attitudes leads to the different concepts of stereotypes and prejudice. Stereotypes are beliefs and opinions that one holds about specific group members, while prejudices refers to one's attitudes (i.e., evaluations and affective responses) towards people because of their group membership. Even though the concepts appear similar and are interconnected, it is important to not confuse stereotypes and prejudice. This is due to the fact that holding stereotypes does not automatically mean that one is prejudiced. This distinction between stereotype activation and stereotype application is elaborated in the following chapter.

Moreover, the development of positive beliefs about the ingroup and negative beliefs about the outgroup can be explained through one's personal need of a positive self-esteem. This need in combination with the identification with the ingroup, makes one's group a tool to meet this need. Comparing the ingroup with relevant outgroups based on some selected characteristics allows for the obtainment of a self-image. Thereby, one strives for a comparison result that makes one's ingroup look better than the outgroup.

Based on the psychologists increasing interest in explaining the tension between ingroups and outgroup, several theories with regard to intergroup relations developed. Social identity theory can be said to be the foundation for other theories in this area, due to the fact that it explains the fundamental processes of categorization and self-categorization, and thus makes it clear how one receives a social identity, and how this leads to the differentiation between ingroup and outgroup. A further theory, is the realistic group conflict theory which has been the theory that was developed first with regard to intergroup relations. It argues that the cognitive distinction between ingroup and outgroup automatically leads to a feeling of competition for resources between these groups, and hence, forms the basis for developing negative attitudes (i.e., prejudices) towards members of the outgroup. However, empirical evidence showed that specific conditions must be met in order to lead to the perception of competition, which means that contents of the theory in its original form were recognised as false. These two theories and the underlying processes of the development of prejudice are brought up again in chapter 6. It has the purpose of transferring the universal rules with regard to intergroup relations into the context of interorganizational collaborations, and explains why prejudice arises in these cross-organizational projects.

In order to provide the reader with some background knowledge about the topic of creativity, the literature review included a general introduction into creativity and made the reader aware of creativity as a complex and multifaceted phenomenon. The general term is used in various contexts and has different meanings within these contexts. This allows for a magnitude of theories and concepts about creativity, which enable differentiations between more concrete phenomena in relation to creativity, such as the creative person, the creative process, creative outcome, and the cognitive and motivational processes that underlie creative behaviour. In this thesis, special emphasis is put on the creative person, the creative process, and environmental factors that impact creative behaviour (press). Moreover, the concepts of creative potential and actual creative performance are of major importance.

However, the enormous number of different perspectives on creativity also increases its complexity. Nevertheless, creativity is of great importance for any field and area all over the world. Its significance in the organizational context becomes especially apparent in section 4.2. that illustrates the tight connection between creativity and innovation, since creativity often is a prerequisite for innovation. While creativity refers to the generation of ideas, innovation can be seen as the implementation process of these ideas. It is for this reason that the topic of organizational creativity received increasing attention. Organizational creativity describes how individuals within complex social systems work together in order to generate a novel and useful outcome (e.g., product, service, process). Novelty (or originality) and usefulness (or appropriateness) can be said to be the two key characteristics that describe creative outcome. It is for the development of these creative outcomes that organizations establish interorganizational collaborations. The desire to not only include organizationally internal knowledge and skills but also external ones originates from the fact that employees in other organizations possess different knowledge and skills than the internal employees. More diverse resources increase the possibilities to combine these resources in new ways,

and thus increase the likelihood of creative outcome and innovation. What the company actually strives for in order to come up with innovative ideas is group creativity within the interorganizational group. Due to the diverse mental resources that members of a group possess, a group generally is said to have more creative potential than an individual. Nevertheless, it is also argued that this existing potential can often not be fully used, which is caused by various negative effects that arise when people are working in a group. However, these effects can be reduced by using some appropriate methods. Moreover, different group processes highly influence the creative performance of this group. These, in turn, are also influenced by multiple contextual and environmental factors, which once again stresses the complexity that is accompanied by creativity.

The literature review provided the reader with a comprehensive understanding about the relationships between creativity, innovation, organizational creativity, interorganizational collaboration, and group creativity, which highlighted the importance of group creativity within interorganizational collaborations for companies, in order to survive in a dynamic and continuously changing market environment. It is for this reason that the company's success highly depends upon the success of the creative collaboration. Therefore, anything that negatively impacts this success should be identified and eliminated. This is where the second and third research question are involved. It is assumed that prejudices have negative consequences for group creativity. These consequences are explained in detail in chapter 7. Since an organization should strive for eliminating the negative impacts on creative collaborations for the purpose of fully making use of the group's creative potential, methods for how this potentially can be done are presented in chapter 8, which provides answers to the third research question of this thesis.

## 5. Stereotype Activation and Stereotype Application

According to Hilton and von Hippel (1996), thinking in stereotypes is caused by various cognitive and motivational reasons, such as simplifying the process of storing and retrieving information. Stereotypes serve the purpose of maintaining an overview and remaining responsive in the different situations that people encounter. So stereotypic thinking is mainly about the maintenance of an individual's functionality. Through this, it becomes apparent that categorization—the process of simplifying the environment by creating categories on the basis of characteristics that a particular set of people appear to have in common—and stereotypic thinking are closely related to each other, namely in a manner that categorization constitutes a precondition for stereotypic thinking.

The same authors as above defined stereotypes as “beliefs about the characteristics, attributes, and behaviors of members of certain groups” (p. 240). These beliefs per se, either negative or positive, do not automatically influence a person's attitude or behaviour. However, it is possible, that an individual's awareness of stereotypes can result in the individual being prejudiced towards other social groups (Kite and Whitley 2016). Furthermore, one should be made aware of the fact that people are more likely to stereotype persons that are unknown or barely known by these people. The more people are familiar with a person, the less likely they are to categorize and, thus, stereotype him or her, since people rather perceive this well-known person as an individual with its own characteristics, instead of seeing the person as belonging to a group whose members share the same characteristics. The following subchapters serve the purpose of illuminating the differences between a person possessing the knowledge of stereotypic beliefs and a person using these beliefs, which is termed as stereotype activation and stereotype application. The section clarifies the distinction between stereotypes and prejudices in order to understand that holding beliefs about members of certain social groups is not to be equated with holding prejudice, since the latter also refers to one's attitudes and behaviours towards those members and not solely to beliefs about them.

### 5.1. Stereotype Activation

Stereotype activation refers to “the extent to which a stereotype is accessible in one's mind” (Kunda and Spencer 2003, p. 522). As mentioned before, stereotypic beliefs are developed towards specific social groups and their members. This means that stereotypes are not activated when a person is in a situation that is completely unrelated to the social group about which the person has developed beliefs. However, the importance of stereotypic beliefs changes, as soon as the person encounters or anticipates the encounter with a member of the group this person has stereotyped; stereotype activation occurs. The process of stereotype activation is differentiated between automatic and motivational activation. Even though these two concepts are looked at separately in theory, it is hard to distinguish between them in practice where both types of activation act in a joint manner (Kite and Whitley 2016). This does not mean that the two activation mechanisms must pursue the same objective, instead, they can work towards opposite directions which is either inhibition or reinforcement of stereotype activation. In this case, the stronger mechanism decides if stereotypes are activated or not (Kunda and Spencer 2003).

### *5.1.1. Automatic Stereotype Activation*

Automatic stereotype activation means that a person unconsciously categorizes people and without awareness develops stereotypes about specific social groups (Kite and Whitley 2016). Research shows that people are more likely to automatically activate stereotypes when the duration they are exposed to a stimulus (e.g., a picture, a sound) is short. This will say, an increasing duration of exposure to a certain stimulus is likely to decrease the probability of automatic stereotype activation, because people have more time to rethink or even control their initial thoughts (Cunningham, et al. 2004). Other factors that influence automatic activation refer to task formulation and a person's focus. While the former differentiates between explicitly asking for either categories or for unique characteristics of a person (Wheeler and Fiske 2005), the latter includes the focus on something that is completely unrelated to one's stereotypic beliefs and, consequently, does not allow stereotype activation to happen (Correll, Guillermo and Vogt 2014). It can be said that automatic activation is highly dependent upon the strength of the link that exists between a category and certain stereotypes. This strength, in turn, depends on the degree to which an individual has learned and internalized to associate particular stereotypes with a category. Thus, the more readily an individual assigns specific characteristics, attributes and behaviours to a social category, the more likely it is that these stereotypes automatically will be activated when the individual encounters members of that category (Cozzarelli, Tagler and Wilkinson 2002). There are several factors that facilitate automatic activation, such as, prototypicality, the situational context, the level of prejudice, and cognitive busyness.

Prototypicality refers to the match between a person's characteristics and a category. The more a person possesses characteristics that are assigned to a certain category, the more stereotypic beliefs apply to that person and, therefore, the more likely it is that automatic activation occurs (Kite and Whitley 2016).

The second factor, the situational context, illustrates the complexity of stereotypes. Since developed beliefs about a social group can be both negative and positive (Czopp and Monteith 2006), both the environmental and social context have an impact on which stereotypes are activated. Moreover, main stereotypes (e.g., age, gender, ethnicity) are accompanied by subtypes (e.g., profession, sportiness) which can also be both positive and negative (Devine and Baker 1991; Hummert 1990). What subtypes are used to supplement the salient stereotypes is dependent on the situational context in which one is encountering the stereotyped person (e.g., Devine and Baker 1991). As one might imagine, seeing someone sleeping under a bridge leads to a different chain of associations compared to seeing someone giving a speech at a symposium.

A further influence factor for automatic stereotype activation is people's level of prejudice. Kawakami, Dion and Dovidio (1998) assume that high prejudiced people are generally more likely to categorize and, consequently, also to think in terms of stereotypes. Therefore, prejudiced people develop a stronger association between categories and stereotypes compared to low prejudiced people, which results in an easier accessibility of stereotypes for high prejudiced people and, thus, makes these people more susceptible to automatic stereotype activation.

The fourth factor that facilitates automatic activation is cognitive busyness. Categorization and therefore also stereotypes are a way of processing information. Since this process is not only related to the storage of information, but also to its retrieval, people need to use their memory in order to be able to assign persons to before built and stored categories. Categorization or, in other words, the retrieval of information from memory requires working

memory capacity. If this capacity is already in use to complete another task (e.g., remembering an address), it is likely that automatic stereotype activation will not occur. Simply put, cognitive busyness (i.e., working memory capacity utilisation) reduces automatic stereotype activation (Gilbert and Hixon 1991).

### 5.1.2. Motivated Stereotype Activation

Since people's attitudes and behaviours are dependent on the goals they want to achieve and needs they want to fulfil, the extent to which they can achieve and fulfil these through stereotype use determines people's motivation to activate stereotypes. The motivation for this activation is not an unchangeable constant, but rather influenced by situational and personal factors. Four basic goals that have an impact on motivated stereotype activation are discussed below, they include, comprehension goals, self-enhancement goals, social adjustment goals, and prejudice-control goals (Kunda and Spencer 2003).

When a person strives for achieving comprehension, stereotype activation serves as a tool for processing information in a way that allows the person to better understand the situation it is in. In this case, stereotypes provide this person with information about what to expect from interaction partners and how to react and behave in an appropriate way (Kunda 1999).

Considering the self-enhancement goal, a person uses stereotype activation for a positive self-presentation. This means that a person is especially inclined to activate negative stereotypes towards other people, if this results in a better self-portrayal for that person, because making others look more negative, makes that person look more positive (Fein, et al. 2003).

The third goal that influences stereotype activation is social adjustment. As different research findings confirm (e.g. Blair 2002; Schuman, et al. 1997), it can be said that a person's attitudes and behaviours are motivated by complying to social norms and rules, which is why social frameworks strongly impact the motivation to activate stereotypes (Lowery, Hardin and Sinclair 2001).

Finally, stereotype application is dependent on a person's motivation to control prejudiced expressions. This control is caused by a person's desire to neither behave in a prejudiced manner, nor be viewed as being prejudiced by other people, since prejudices are generally perceived as something negative (Dunton and Fazio 1997; Plant and Devine 1998). Moreover, some people demonstrate a strong sense of justice and take the view that all humans must be equally valued, both conscious and unconscious, which is why these people are highly motivated to not stereotype, due to the fact that stereotypes would not comply with their ideology (Moskowitz, Salomon and Taylor 2000).

## 5.2. Stereotype Application

Stereotype application refers to "the extent to which one uses a stereotype to judge a member of the stereotyped group" (Kunda and Spencer 2003, p. 522). Stereotypes that are not activated cannot be applied. Such an unambiguous statement cannot be made with regard to activated stereotypes. Their application is dependent on both motivational factors and a person's ability to deny the application. Therefore, stereotype application is a two-step process, as illustrated in *Figure 5.2.* below.

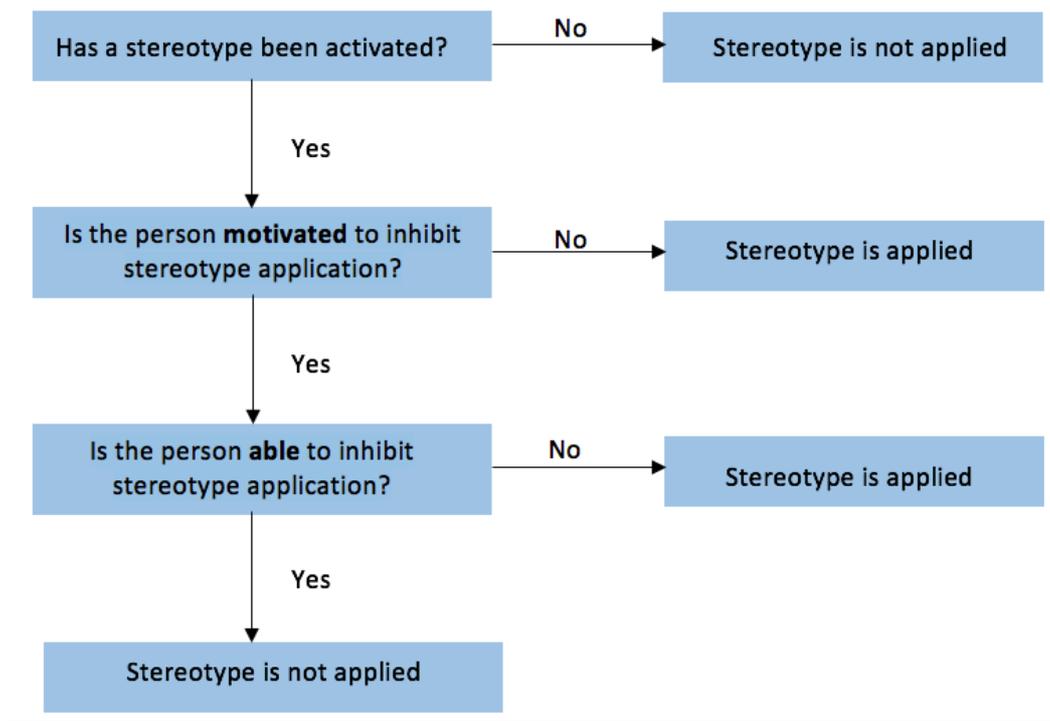


Figure 5.2.: Stereotype application.

Adapted from Kite, Mary E., and Bernhard E. Whitley. 2016. *Psychology of prejudice and discrimination* (p. 141). 3<sup>rd</sup> ed. New York and Abingdon: Taylor & Francis.

The first condition that must be fulfilled in order to waive the application of stereotypes is a person's motivation to do so. If a person is not motivated enough, stereotype application occurs. If a person is motivated enough to inhibit stereotype application, that person's ability to do so decides about application or non-application of stereotypes. In the following, it is elaborated on the motives and abilities that are needed to stop stereotyping.

### 5.2.1. Condition 1: Motivation to Inhibit Stereotype Application

In case a stereotype is activated, it requires a person to be motivated in order to actively prevent stereotype application. This motivation can be both strengthened and damaged by several influence factors. Some of these are similar to the ones presented with respect to motivated stereotype activation, while others are listed for the first time (Kite and Whitley 2016).

The first influence factor refers to a person's motivation to control prejudice. If a person does not want to express stereotypic beliefs or behave in a prejudiced manner, it is likely that stereotype application is inhibited (Yzerbyt, et al. 1994).

A further motivational factor, that has also been mentioned before, is the goal to achieve comprehension. An individual that strives to understand people's actions in particular situations is more likely to use individuating information about the included persons. This means that rather than applying general stereotypes, individual characteristics and behaviours are perceived and analysed (Kunda and Spencer 2003). However, to what extent a person seeks for individuating information highly depends upon the benefit the person reaps from this extra effort. If individuating information does not result in any benefit, an individual rather saves the mental capacity that is required for this process (Brewer and Feinstein 1999;

Fiske, Lin, and Neuberg 1999). Furthermore, stereotypes may still be existing or even be reinforced besides individuating information for two reasons. The first one refers to an individuals' expectations when starting an interaction with a before stereotyped person. Through having a certain picture in one's head, an individual is particularly receptive to those kind of information that confirms the already existing picture, and unconsciously shapes the interaction in a manner that proves the stereotype to be accurate (Snyder and Swann 1978). The second reason is based on the fact that people with stereotypes are more likely to interpret information to the advantage of before established beliefs, which especially applies to ambiguous information (Kunda and Sherman-Williams 1993). This clearly illustrates that the perception of individuating information in itself is not sufficient to suppress stereotype application. Nevertheless, seeking out for individuating information due to explicitly being asked for providing reliable and accurate information about a person, is likely to inhibit stereotype application, since people want to perform the task well and maintain their trustworthiness (Neuberg 1989).

An additional factor that influences stereotype application is the before mentioned self-enhancement goal. As we know, people who want to achieve this goal are more likely to activate stereotypes if they are threatened in some manner. Simultaneously, this feeling of threat facilitates stereotype application, which means that stereotypes are used as a tool to improve one's self-image after it has been damaged. To complement this, research shows that enhancing the positive image of a person can lead to the inhibition of stereotype application (Fein and Spencer 1997).

A further influence factor in relation to one's motivation to inhibit stereotyping is a person's cognitive style which refers to the different levels of motivation people possess with regard to their procedures of searching for and using information. It is differentiated between people that are high and people that are low on need for cognition. While the former is characterized through careful thinking and considering all available options, the latter is described through simple decision making and less cognitive effort. Therefore, people high on need for cognition are less likely to use stereotypes compared to people low on need for cognition (Crawford and Skowronski 1998; Florack, Scarabis and Bless 2001). A further trait regarding cognitive style refers to causal uncertainty (Weary and Edwards 1994). People low in causal uncertainty do not deem it necessary to search for further information, since they think they know how things work. On the other hand, people high in causal uncertainty constantly strive for additional individuating information to develop an accurate understanding about how everything operates. The initially described people are more inclined to rely on the use of stereotypes compared to the following described ones (Weary, et al. 2001). To close the part about cognitive styles, need for closure (Kruglanski and Webster 1996) will be the last presented trait. People high on this trait strive for explanations that are simple and unambiguous, which is consistent with the concept of stereotypes. Therefore, these people are more likely to apply stereotypes than are people low on the need for closure (Dijksterhuis, et al. 1996; Neuberg and Newsome 1993). Finally, it should be pointed out that the three before presented types of cognitive styles are independent from each other, which allows a variety of trait combinations to exist (Kite and Whitley 2016).

The final factor influencing one's motivation to inhibit stereotyping is social power. Generally, high-power people have a significant impact on what low-power people receive, both in material (e.g., monetary rewards) and non-material (e.g., promotion or praise) ways. High-power people enjoy a high status and a high position in the existing hierarchy. The contrary is true for low-power people (French and Raven 1959; Vescio, et al. 2009), which is why they can be differentiated with regard to stereotype use. Different studies confirm the

general rule that people with a hierarchically superior position are more likely to use stereotypes towards subordinates than are low-power people towards those that enjoy a higher status (e.g., Fiske 1993; Vescio, et al. 2009; Goodwin, et al. 2000).

According to Goodwin and Fiske (1996) this behaviour is attributable to three reasons. The first one refers to the fact that people in higher positions are enabled and expected to judge their subordinates. They start to rely on stereotypes due to their assessment that these beliefs are accurate. The second reason is based on the high-power people's desire to maintain the status difference. In this case, stereotypes, especially negative ones, are used as a tool to justify the existing status difference. The third reason refers to low-power people and their seeking for individuating information about their superiors in order to position themselves better. Possessing more knowledge about superiors can help low-power people to behave in a more desired way from the superior's point of view, which in turn makes it more likely to receive rewards. The contrary is true for the high-power people, they are not required to gain individuating information about subordinates and, therefore, use stereotypic beliefs about them. Nevertheless, high-power people can be motivated to do otherwise through receiving a reward dependent on their subordinates' performance (Vescio, Snyder and Butz 2003), through feeling responsible for their subordinates' results (Goodwin and Fiske 1996), and through wanting to help them with their problems (Overbeck and Park 2001). This clearly shows that the provision of appropriate incentives can lead the superiors to feel less motivated to apply stereotypes.

### *5.2.2. Condition 2: Ability to Inhibit Stereotype Application*

If people are sufficiently motivated to not use stereotypes, they further need the ability to do so in order to inhibit stereotype application. This ability depends upon a person's cognitive busyness. As it was explained before, cognitive busyness inhibits stereotype activation. However, with regard to stereotype application the opposite is true, which means that cognitive busyness reinforces stereotype application. This opposing effect can be explained through the following: under the assumption that a stereotype is not activated yet, people who focus on a specific stereotype unrelated task do not have the cognitive resources available to activate stereotypic thoughts and, thus, stereotype activation will not occur. On the other hand, under the assumption that a stereotype is activated, people who focus on a specific task do not have the cognitive resources available to search for individuating information about a person, which is why they use stereotypes to more quickly process the new available information and continue with their actual task. There are different factors that facilitate cognitive busyness and therefore stereotype application. One of these is the complexity of a task. The more complex the task, the more likely people are to use stereotypes compared to when they perform less complex tasks (Bodenhausen and Lichtenstein 1987). Besides complexity, working under time pressure does also result in a higher degree of stereotyping (de Dreu 2003; Kruglanski and Freund 1983).

### **5.3. Summary**

The conscious and unconscious cognitive processes that are executed before people act on the basis of their stereotypic beliefs can be divided into categorization, stereotype activation, and stereotype application. Categorization, which refers to simplified information processing by creating different categories, is a precondition for stereotypic thinking which constitutes both negative and positive beliefs about the members of certain social groups, or categories,

with regard to their characteristics, attributes, and behaviours. If these beliefs are activated, their accessibility in one's mind, depends on both unconscious and conscious processes. While unconscious categorization and, thus, stereotyping results in automatic stereotype activation, and is facilitated through prototypicality, the situational context, a person's level of prejudice, and cognitive busyness, there are also different motivational factors that influence the activation of stereotypes, these include comprehension goals, self-enhancement-goals, social adjustment goals, and the motivation to control prejudice. If there is one certainty, it is that unactivated stereotypes cannot result in stereotype application which means the use of stereotypic beliefs to judge people who belong to a stereotyped group. The situation is different for activated stereotypes. To inhibit stereotype application both a person's motivation and a person's ability to prevent application is required. A person's motivation is facilitated by comprehension goals, self-enhancement goals, the motivation to control prejudice, cognitive styles and social power. A person's ability to prevent stereotype application is dependent on only one factor which is cognitive busyness.

In conclusion, the entire process from categorization, to stereotypes, to stereotype application, and finally to stereotype application contains a large number of influencing factors that are only partially controllable, which is why the process entails a high degree of complexity. Thus, it can be small differences that decide about the occurrence and non-occurrence of stereotype activation and stereotype application.

## 6. Interorganizational Collaboration and Prejudice

The previous chapter and the literature review explained why stereotypes are not synonymous with prejudices. Even though both concepts are based on the categorization process, they are still distinct. Stereotyping includes both stereotype activation and stereotype application. While the existence of the latter results in prejudice, stereotype activation does not automatically lead to prejudice. This means that even though a person might be aware of specific beliefs about a group members' properties, this knowledge does not automatically influence the person's behaviour. Thus, activation only refers to the awareness of beliefs, while application implies that the beliefs are used to evaluate members of groups, and therefore shape one's behaviour towards these people. Due to the fact that prejudice is defined as an attitude towards people because of their group membership, and that these attitudes also influence one's behaviour towards members belonging to certain social groups, it can be said that the application of stereotypes is tantamount to prejudice. Hence, the stereotype process leads to prejudice (Brown 2010; Kite and Whitley 2016). Nevertheless, when only referring to the term stereotype, one should bear in mind that this could be either solely stereotype activation or stereotype application (which presupposes activation).

After having explained the difference between stereotypes and prejudices, the following sections are concerned with how prejudices arise in interorganizational collaborations. On the basis of different intergroup relation theories, including the social identity theory, the relative deprivation theory, the realistic conflict theory and the concept of intergroup anxiety, different propositions are developed. These propositions constitute a transfer of the general principles of the theories to the interorganizational context. The chapter concludes with a summary that provides the reader with an overview about how prejudices, based on the presented theories, arise in interorganizational collaborations.

### 6.1. Social Identity Theory and Prejudice

In order to understand, how prejudices emerge from interorganizational collaboration, one first needs to be aware of what actually constitutes an organization. A widely accepted definition is the one provided by Howard E. Aldrich (1979), who described organizations as *"goal-directed, boundary-maintaining, activity systems"* (p. 4). The definition's first dimension, goal-directed, means that an organization serves a specific purpose, which is fulfilled through goal-oriented actions of the organization's members. The second dimension, boundary-maintaining, refers to the distinction that is made between members and non-members, which differentiates an organization from its environment. The organization's ability to control its boundaries is especially important with regard to its maintenance as an entity. The final dimension, activity systems, stresses the various interdependent processes of an organization, which are executed by different members, fulfilling different roles within the organization (Aldrich 1979).

Considering the previously explained social identity theory (see section 4.8.), the boundary-maintaining dimension appears to be particularly relevant with respect to the emergence of prejudices. The distinction that is made between members and non-members of an organization is comparable or even tantamount to the cognitive distinction that one makes between ingroups and outgroups, and consequently constitutes the origin of stereotypes, prejudice, and discrimination (Kite und Whitley 2016). In order to facilitate the understanding of the concrete development from a boundary-maintaining system to an organization with

prejudices towards its direct environment, the following section serves the purpose of giving a detailed explanation of the individual processes that lead to this development. With regard to this, social identity theory and its contents constitute the basis for the explanation.

Haslam (2004) proposed that activities in organizational contexts can only be understood if individuals are considered as members of an entity, rather than as individuals that work isolated and independent within the organization. This opinion is supported by Deutsch and Kraus (1965), who emphasised that people do not operate in a vacuum and that one needs to see individuals in their social contexts in order to understand their interactions. The importance of the social context results from the psychological process that takes place when individuals define themselves in terms of group memberships and not as single individuals. Through assigning oneself to a specific social group that he or she has an emotional connection to and that is valued in a way (e.g. an organization), the individual takes on a social identity. This process of social categorization results in group members thinking in terms of 'we' and 'us', instead of 'I' and 'me', since they see themselves as part of a group and identify with this entity. Due to this, one starts to differentiate between people who belong to one's own group and those who do not. Thereby, the former is labelled as ingroup and the latter as outgroup (Kite and Whitley 2016). An interesting psychological phenomenon with regard to the distinction between the ingroup and outgroup is that individuals strive to ensure that their own group, the ingroup, is portrayed in a more positive light than the outgroup. In order to achieve this aim, potential comparative methods are applied in a way, that enables one to view one's ingroup as better than the outgroup. This positive distinctiveness makes an individual feel good about his or her social identity, and thus about who they are. Moreover, the identification with a social group results in ingroup-favouritism, which means that individuals favour ingroup members over outgroup members (Kite and Whitley 2016; Haslam 2004).

A study conducted by Tajfel et al. (1971) clearly confirmed the existence of ingroup-favouritism. Their findings also indicated that an individual places greater emphasis on the possible distinction between members of the ingroup and outgroup, rather than assigning the highest profit in absolute terms to members of the ingroup. This was the result of an experiment where subjects were randomly assigned to one of two groups and had to award a reward (i.e., money) to an unknown member of both their own group and the other group. For the purpose of understanding the decision strategy that the participants applied when choosing the reward for the members of the two groups, the participants had to choose one pair of numbers (one number representing the amount of money for the ingroup and the other the amount of money for the outgroup) out of several money pairs. The various options to choose from enabled the experimenters to differentiate between four decision strategies. These were (1) the strategy of fairness, which includes to assign the same amount of money to both members; (2) the strategy of maximum joint profit, whereby both members receive the greatest possible total amount of money; (3) the strategy of maximum ingroup profit, whereby the ingroup receives the largest possible amount of money; and (4) the strategy of maximum difference in favour of the ingroup, whereby the subject selects this one option that represents the most clear difference between the reward assigned to one's ingroup and that one assigned to the outgroup. The evaluation of the chosen number pairs clearly showed, that the majority of responses favoured the ingroup, and that the strategy of maximum difference was a more frequently employed strategy than the one for maximizing the common benefit of both group members, and for maximizing the ingroup profit (Tajfel, et al. 1971). These results once again indicate the importance of presenting one's ingroup as better than the

outgroup, since the subjects were less interested in maximizing their ingroup's absolute profit, but rather in maximizing their ingroup's relative benefit in comparison to the outgroup. Similar studies conducted after the presented one came to the same conclusions (e.g., Tajfel 1978a).

Furthermore, studies showed that ingroups and outgroups can be created from the most minimal conditions (e.g., Tajfel 1974; Doise, et al. 1972). A widely known experiment that demonstrated this so called minimal group paradigm was the one conducted by Henri Tajfel (1969). Participants in his research study were asked to estimate the number of dots that were projected on a screen. After, they were told that some participants underestimated the number of dots, while others overestimated those numbers. Each participant was assigned to one of these two groups. Even though they believed that they were either an over- or an underestimator, the actual classification by the experimenters was random. The group assignment was followed by asking the subjects to make judgments about those people who belong to one's own group and those who do not. Throughout the entire experiment, no participant had any contact to other participants, meaning that they were asked to talk about people that they have never seen before, and that they did not know more about than either being an over- or an underestimator. Nevertheless, results indicated that the subjects felt as belonging to a unique group and that they made distinctions between their statements about members of their ingroup and members of the outgroup (Tajfel 1969). Later on, this experiment received support by a study carried out by Doise et al. (1972), which concluded that subjects assigned to groups based on an unimportant variable described their ingroup as more positive than the outgroup, even though they did not meet any of the other study participants before and did not have any further information, except from knowing this one trivial variable that distinguished the two groups. A further study by Brewer and Silver (1978) showed that the attempt to point out both the similarities between the individual participants and the irrelevance of the group membership, did not result in any difference with respect to ingroup-favouritism; participants were still more likely to favour ingroup members over outgroup members.

These presented studies clearly demonstrate, that the distinction between ingroup and outgroup does neither require face-to-face interaction, nor conflicts of interest, nor that it is based on any previous hostility between the two groups. Moreover, the distinction does not require any kind of personal profit or benefit (Tajfel 1978a), since rewards in the first study could never be given to oneself, but only to unknown members of either one's ingroup or outgroup. Thus, it becomes apparent that very minimal, and even trivial criteria can lead a person towards differentiating between the ingroup and outgroup, and consequently can result in ingroup-favouritism. With regard to this, Turner (1975) and Tajfel (1978b) put emphasis on the importance of the categorization process. They suggested that it is the mere act of identifying with and categorizing oneself into a specific social group that finally makes a person favour an ingroup member over an outgroup member. As soon as an individual identifies itself as a group member, its behaviour gets a whole new meaning. The feeling of belonging to a certain group ensures that even people, that normally act in a fair and decent manner, behave apparently unfair to the outgroup (Kite and Whitley 2016; Haslam 2004). That such a behaviour can be caused by minimal and trivial differences, clearly demonstrates that probably any perceived difference can serve as a basis for distinguishing between an ingroup and an outgroup.

This cognitive differentiation between one's own social group and other social groups is the origin of stereotypes and prejudice. Social categorization is the starting point for assigning specific characteristics to members of social groups, which goes hand in hand with

the development of certain beliefs and opinions about group members' traits and behaviours. This cognitive process is exactly what makes stereotypic beliefs arise. As a result, people's future actions and especially interactions with members of social groups will be led by these beliefs and opinions (Kite and Whitley 2016).

This illustrates the key role social categorization plays with regard to stereotypes and prejudice, which is why it is important to know the reason for categorization. As previously mentioned, people need to categorize in order to handle the overwhelming amount of information they are confronted with every day (see section 4.8.). Thus, categorization is a method to quickly process information. People and objects get assigned to certain categories and people do think in these categories in order to have more cognitive capacity available for performing higher valued tasks and activities. Consequently, the sorting of people and objects into categories and the accompanied judgments that are made about these, is an automatically applied method for maintaining the ability to process new and/or more important information (Lippman 1922). Through categorization and the assignment of different characteristics, attributes and behaviours to different social groups, one starts to think in terms of social identities and perceives objects and people as members of groups, instead of seeing these as individuals. As previously explained, this assignment applies also to oneself, meaning that an individual sorts itself into a social category, which then leads to the distinction between the ingroup—one's own social group—and the outgroup—other social groups—. This in turn results in ingroup bias or ingroup-favouritism, as it was previously termed. Even though, the reasons for ingroup bias have been briefly mentioned before, the two main explanations, offered by social identity theorists, should be stressed again. These are generally independent from each other, but they can also have a collective effect on ingroup bias (Kite and Whitley 2016).

The first explanation is the categorization-competition hypothesis. It suggests that the mere act of categorization and, associated therewith, the distinction between the ingroup and the outgroup is a sufficient condition for the emergence of intergroup competition (Kite and Whitley 2016). This is based upon the erroneous assumption that there exist greater differences between the ingroup and outgroup, than there really are. This assumption is caused by an outgroup homogeneity effect, which arises through thinking in terms of social identities (Linville, Fischer and Salovey 1989). The effect describes the process of "perceiv[ing] members of the outgroup as more similar to each other than they actually are, while seeing members of the ingroup as distinct individuals. As a result, people believe that differences between the ingroup and the outgroup are greater than they really are" (Kite and Whitley 2016, p. 304). The greater perceived difference intensifies the ingroup-outgroup-differentiation, which leads to a feeling of competition, and thus to the desire of winning and the need of protecting the ingroup's interests, which goes hand in hand with ingroup-favouritism (Tajfel & Turner 1986).

The second explanation for ingroup bias is the self-esteem hypothesis. It is based upon the assumption that individuals strive for the achievement and maintenance of a positive social identity. Since individuals identify with their social group, and the group's identity partly determines who they are, an individual's self-esteem is built up through the possession of a positive social identity; meaning that any positive evaluation of the social group serves simultaneously as self-affirmation for an individual of that group (Aberson, Healy and Romero 2000). Thereby, the comparison with other social groups is of immense importance, since a positive social identity is achieved through comparing with other social groups and perceiving one's own group as better than the others. This highlights the relational and comparative characteristic of a positive social identity. Consequently, individuals choose these comparison

mechanisms that make their own group appear in a positively different light in order to stand out from the relevant outgroup(s) (Haslam 2004; Kite and Whitley 2016). This competitive behaviour was also apparent in the previously presented studies. Subjects described members of their ingroup in a more positive manner compared to members of the outgroup. This was the case, even though the subjects have never interacted with any members, neither of the ingroup, nor the outgroup. The only information the subjects possessed was that they had one trivial variable with the ingroup members in common, while this variable was distinct from outgroup members. These findings clearly support the self-esteem hypothesis as an explanation for ingroup bias.

With regard to interorganizational collaboration, it seems reasonable to assume that the collaboration participants differentiate between those members that belong to their own organization and those that do not. Under the assumption that an individual identifies with its own organization, it starts to form an ingroup, including everyone that is working for the same organization, and thus, automatically also forms an outgroup, including everyone that is not working for the individual's organization. This means that even before meeting and interacting with a person from another organization, social categorization processes result in a cognitive distinction between members of one's own and members of any other organization. As described above, the consequence is that an individual favours members of the own organization over members of a foreign one. Moreover, the distinction between ingroup and outgroup is likely to make one perceive the differences that exist between the organizations as greater than they actually are, which causes a feeling of competition between the members of the participating organizations. Finally, the self-esteem hypothesis states that members strive for the creation of a positive image of their ingroup, which means that members of organizations use comparison methods that make their organization look better than other organizations. This results in the following propositions.

*Proposition 1:* When an individual identifies with its organization, it defines itself in terms of group membership and receives a social identity. Through self-categorization and the identification with a specific social group—one's organization—, one starts to differentiate between members of one's ingroup (i.e., one's own organization) and members of the outgroup (i.e., other organizations). Based on this differentiation they start to develop stereotypic beliefs about, and certain attitudes towards members that belong to the outgroup.

*Proposition 2:* Individuals perceive the differences between their ingroup and the outgroup as greater than they actually are, which results in an intensified distinction between ingroup and outgroup members, and thus leads to a feeling of competition between the members of different organizations.

*Proposition 3:* This distinction between members of one's own organization and members of other organizations and the perceived feeling of competition leads to ingroup-favouritism, whereby ingroup members receive preferential treatment compared to outgroup members.

*Proposition 4:* The need for enhancing one's self-esteem, which includes to achieving and maintaining a positive social identity, leads to relative comparisons between the ingroup and some relevant outgroups. Thereby, individuals choose such comparison variables and methods that make their own group look better than the other groups. Consequently, members of an organization strive for a more positive portrayal of their own organization in comparison with other organizations.

To sum it up, people make categories for the purpose of quickly processing the overwhelming amount of information they are constantly confronted with. They assign certain characteristics, attitudes and behaviours to the members of these categories, which in turn leads to the development of stereotypic beliefs about and prejudices towards members of the different categories. The process of categorization does also apply to oneself, meaning that an individual sorts itself into a category, when it identifies with a specific social group, such as a sports team, a university, or an organization. Due to this self-categorization, the individual starts to differentiate between the own social category or group—the ingroup—and any other social group—the outgroup—. This distinction between ingroup and outgroup members leads to ingroup bias or ingroup-favouritism, which means that ingroup members receive preferential treatment compared to outgroup members. Social identity theorists proposed two explanations for this ingroup bias. The first one is based on the assumption that groups are naturally competitive, meaning that the mere fact of differentiation between groups leads to competition between them, and thus to ingroup-favouritism for the purpose of protecting the ingroup's interests and the desire to win over relevant outgroups. The second explanation for ingroup bias refers to the assumption that individuals strive for a positive self-image, which is closely related to the achievement of maintenance of a positive social identity, since an individual partly defines itself in terms of its social group membership. A positive social identity is created through comparing the ingroup with other relevant social groups—outgroups—in such a manner that members of the ingroup are always perceived as better than members of the outgroups. This enables the individual to enhance its self-esteem.

Before continuing with other reasons besides social identity theory for the development of stereotypic beliefs and prejudices towards members of other organizations than one's own, the reader should be made aware of the fact that ingroup-favouritism is not to be confused with outgroup derogation or even penalty (Brewer 1999). Actions of and interactions between people are led by both the desire for protecting and strengthening oneself and the own social group, as well as by the desire for social harmony (Stangor and Leary 2006). This means, that even though an individual favours ingroup over outgroup members, it is not automatically trying to harm the latter, but rather the focus lies on putting the own group and its members in a better position compared to non-members and their groups.

## 6.2. Relative Deprivation Theory and Prejudice

Relative deprivation theory is concerned with two interrelated topics. The first one is related to, how people become dissatisfied in relation to some specific issue in their life; and the second one refers to, how people manage this dissatisfaction (Smith, et al. 2012). According to the theory, dissatisfaction arises through not receiving what one was expecting to receive, or through the comparison with people in a similar situation, which then leads the individual to the conclusion that it deserves more than it receives at the moment. Thus, it can be said that the feeling of deprivation is of relative nature, meaning that an individual becomes dissatisfied by comparing its current situation, which then results in the individual believing that it deserves more relative to what it expected to currently have, or relative to what others have right now (Kite and Whitley 2016). This feeling of relative deprivation is comparable to a feeling of unfairness, which in this case can be termed as the perception of low distributive justice (Greenberg 1996). It exists, when people perceive the distribution mechanisms as unfair; instead of allocating resources on the principle of who deserves more gets more,

resources are allocated on the basis of unjust methods. The feeling of relative deprivation per se does not lead to prejudice, but a certain way of responding to this feeling does. Generally, relative deprivation can be divided into two kinds of deprivation, personal relative deprivation and group relative deprivation (Runciman 1966). While the former is concerned with “the degree to which a person feels deprived as an individual”, the latter refers to “the degree to which a person feels that a group he or she identifies with has been deprived of some benefit, independent of the amount of relative deprivation experience” (Kite and Whitley 2016, p. 315). It is solely by the presence of group relative deprivation that prejudice does arise. This is due the reason that an individual does not only perceive its ingroup as being deprived of some gain, but it furthermore blames an outgroup for being responsible for the ingroup’s deprivation. As one might imagine, this attribution of responsibility results in a negative attitude towards members of the outgroup (Kite and Whitley 2016).

Studies confirmed the relationship between group relative deprivation and prejudice and hostility towards outgroups (e.g., Dibble 1981; Vanneman and Pettigrew 1972) and that these antipathies result in prejudiced reactions (Grant and Brown 1995). However, it is not just the experience of relative group deprivation that makes the rise of prejudice more likely, but also the experience of relative gratification (Grofman and Muller 1973). The latter refers to the perception of finding one’s own group in a better position compared to other groups. Even though these two emotions seem rather opposed to each other, studies show that both people with feelings of relative group deprivation and people with feelings of relative gratification are more inclined towards prejudiced attitudes than the participants of a control group. This was also the conclusion of a study conducted by Guimond and Dambrun (2002), whose explanation for these results was based on the distinct objectives that people try to pursue in the two different situations. While people with the experience of relative deprivation focus on the low perceived distributive justice and develop a prejudiced and hostile attitude towards the group they blame for their perceived loss, people with the experience of relative gratification focus on how they can justify the relatively superior position of their ingroup compared to the outgroup. Ingroup members then start to assign negative attributes to the outgroup, in order to vindicate their relatively advantaged status. Thus, both relative group deprivation and relative gratification lead to motives for prejudice and hostility towards outgroups. Consequently, it is only these people, who feel neither relatively deprived, nor relatively gratified, that do not have a motivation to be prejudiced and act in this manner, which means that it is the person’s perception of equality between the ingroup and outgroups that prevents the occurrence of prejudices (Kite and Whitley 2016).

Transferring the relative deprivation and relative gratification theory to the case of interorganizational collaboration, the participants’ perception of inequality between their own organization and the other collaborating partner(s) can be sufficient to trigger antipathy towards these other organizations. When employees of an organization are relatively dissatisfied with some certain aspect in relation to their work situation due to the believe that employees from other organizations, such as collaboration partners, have resources that should actually be allocated to the former employees, the relatively deprived employees start to blame the outgroup for their relative loss, whereupon these negative emotions result in prejudiced actions towards this outgroup. But as previously clarified, it could also be the experience of relative gratification that leads to prejudice. This means that as soon as an employee feels relatively gratified in comparison to employees from other organizations, such as other organizations’ collaboration participants, the former tries to find a reason for justifying its relatively advantaged position, which is why the satisfied employee develops negative beliefs about the outgroup and its members, and thus holds a prejudiced attitude

towards them. However, these two reasons for prejudice require that an employee identifies with its own organization; this self-identification constitutes a necessary condition for the emergence of prejudice. As previously mentioned, interorganizational collaboration can include a variety of partners, such as suppliers, customers, universities, research centres, and even competitors (see section 4.6.). Such a variety does also exist with regard to the variables that can be used for the comparison between the ingroup and outgroups and which then leads to relative deprivation or gratification. These could for example include the comparison of market shares, working conditions, bonus schemes and other kind of reward systems, as well as an organization's future plans for upsizing or downsizing its workforce. In contrast to the social identity theory, where intergroup bias was merely based on the distinction between the ingroup and outgroup, the relative deprivation or gratification theory requires some kind of knowledge about both the ingroup and the outgroup with regard to the chosen variable for comparison. In order to make this knowledge difference more understandable, imagine the following case: Employee A, who works for organization A and identifies with this, was asked to participate in a collaboration with organization B. At the first collaboration meeting, which is attended by several employees from organization A and B, employee A is able to differentiate between A- and B-members without possessing any further knowledge about the foreign organization B. However, additional knowledge, which could also be alleged knowledge, becomes necessary when employee A wants to compare his or her current work situation with the one from employees of organization B. Assuming for example that the two organizations are competitors and that employee A compares the market share of organization A and B, employee A needs to know or at least needs to think that he or she knows these shares in order to compare them. Independent from the absolute numbers, employee A can experience either relative deprivation, or relative gratification compared to organization B, or he or she perceives the organizations as being equal in relation to their outcomes. As it was explained before, only the feeling of equality prevents the emergence of prejudice, while the experience of relative deprivation and gratification leads to a prejudiced attitude and hostility towards B-members.

This results in the following proposition.

*Proposition 5:* When interorganizational collaboration participants are able to compare characteristics of their own organization with the ones from the collaboration partner, this comparison can lead to two different reactions. The first one is caused by either feeling relatively deprived or relatively gratified when comparing the own organization's with another organization's situation, which is followed by negative attitudes and prejudiced reactions towards other organizations. The second reaction does not result in motives for prejudice, since one is perceiving the compared organizations as having equivalent outcomes.

To sum it up, both relative deprivation—the feeling of being deprived relative to one's expectations or relative to the situation of people of other social groups—and relative gratification—the feeling of being in a superior position relative to people of other social groups—can lead to prejudice and hostility towards these other social groups (i.e., outgroups), under the necessary condition that an individual identifies with the deprived or gratified group (i.e., the ingroup). The reason for this is that relatively deprived people blame the outgroup for their ingroup's loss and thus develop an antipathy against the outgroup and its members; and that relatively gratified people focus on reasons for justifying their advantaged position, which is done by the establishment of negative beliefs about the outgroup and its members. Consequently, while both these reactions are followed by prejudiced attitudes towards the

outgroup, the perception of equality between the ingroup and outgroup can prevent the emergence of negative emotions and prejudiced reactions.

### 6.3. Realistic Conflict Theory and Prejudice

Realistic conflict theory explains that people from different groups, but who strive for the same resources, start to dislike each other, because people view any desired resource that is allocated to the outgroup as a loss for their ingroup and thus for themselves. This means that competition for resources and the desire to maximize one's own profit, even if this means that outgroup members get less or nothing at all, are the reason for the development of a negative attitude towards the outgroup, and consequently for prejudices against them (Sumner 1906; Taylor & Moghaddam 1994; Kite and Whitley 2016). Therefore, it can be said that the nature of the functional relation between groups constitutes an important determinant in relation to prejudice.

This assumption was also supported by the widely known "Robbers Cave" experiment (Sherif 2010). The main interest of this study was intergroup relations. The subjects were young male children, who believed to participate in an ordinary summer camp and who did not know each other before. Additionally, in order to minimize the potential effect in relation to intergroup antipathy or hostility caused by differences between the subjects, the participants have been carefully selected and have been considered to be "normal, healthy, socially well-adjusted boys who came from families with the same or closely similar socioeconomic, ethnic, and religious backgrounds" (Sherif 2010, p. 204). The researchers have been presented as staff members so that they could make observations without suspicion. At the beginning of the camp, the participants were spatially divided into two groups, so communication only took place within the own group. The children had time to get to know the other members of their group so that they could establish a stable group structure and that they could grow together to form an entity. The first encounter of the two groups was controlled by the researchers and the camp staff. The encounter was followed by an introduction to several competitive games between the two groups. In addition, the participants were told that only the winning group receives some kind of reward. The findings during this experiment resulted in the following conclusion: "[T]he limiting condition determining friendly or hostile attitudes between groups is the nature of functional relations between them, as defined by analysis of their goals. When the groups competed for goals that could be attained by only one group, to the dismay and disappointment of the other, hostile deeds and unflattering labels developed in relation to the outgroup. In time, derogatory stereotypes and negative attitudes toward the outgroup crystallized" (Sherif 2010, p. 206). This clearly indicates that it is the competitive situation between the groups rather than individual characteristics or background differences that result in negative attitudes towards the outgroup.

A further part of this study was concerned with how the existing hostility between the two groups could be reduced again. Findings suggested that the participants did not become less hostile through mere contact situations, but that friction between the groups could be reduced by giving them a task with a superordinate goal which could only be achieved through collaboration between the two groups. The results also indicated that every additional intergroup cooperation resulted in a decreasing degree of intergroup hostility (Sherif 2010).

Transferring these findings to interorganizational collaboration, intergroup relations can look quite different depending on the considered partners. While it is very likely that a company

and its direct competitor were competing for the same resources at some point, it is less likely that this company did so with its lead users. Therefore, realistic conflict theory seems to be only relevant for those interorganizational collaboration teams whose prehistory is marked by competitive relations between the participating organizations, such as direct competitors. As the second part of the Robbers Cave experiment indicated, friction between two previously competing groups can be reduced by jointly serving one superordinate goal that can solely be achieved through collaborative interactions between the two teams. Even if interorganizational collaboration serves a common superordinate goal, it is dependent on the nature of the task if there is an actual need for collaboration between the ingroup and outgroup, or if it is only desired by the participants' employers. Since the task design has a great impact on the extent of collaboration between the participants of this project (West, Sacramento and Fay 2012), it is crucial for a successful collaboration. This means that the degree to which formerly competing organizations are working together in a joint project is not solely determined by a superordinate goal, but also by the actual requirements of the task (an elaboration on this can be found in section 8.2.2.).

Based on the realistic conflict theory the following proposition is made.

*Proposition 6:* If interorganizational collaboration includes groups that previously had a competitive relation to each other, it is likely that the initial situation of the collaboration is characterized by hostility and prejudice between the participating organizations.

Although it is more than 50 years since the Robbers Cave experiment was carried out, the realistic conflict theory's validity has been demonstrated multiple times by findings of studies all over the world (for overviews see Jackson 1993; Brown 2010). Furthermore, a current study even claims that the competitive situation between the ingroup and outgroup can even lead to prejudiced attitudes towards an uninvolved third group. This indicates that the mere existence of competition between groups can through a carry-over effect of competition result in generally higher levels of prejudice (Sassenberg, et al. 2007).

For interorganizational collaboration this means that members of a group who face competition are more likely to carry over their negative attitudes and prejudice onto their collaboration partners, even if these are not involved in the competitive situation. Since for many firms, innovativeness is a source of great importance for growth and competitive advantage, and many firms use collaboration projects for the purpose of strengthening their innovativeness (Crossan and Apaydin 2010, Damanpour 1991), it seems logical to assume that the majority of groups that participate in collaborations face competition. This means in turn that it is also the majority of participants in interorganizational collaborations that are more likely to hold prejudiced attitudes towards any type of outgroup, which results in making the following propositions.

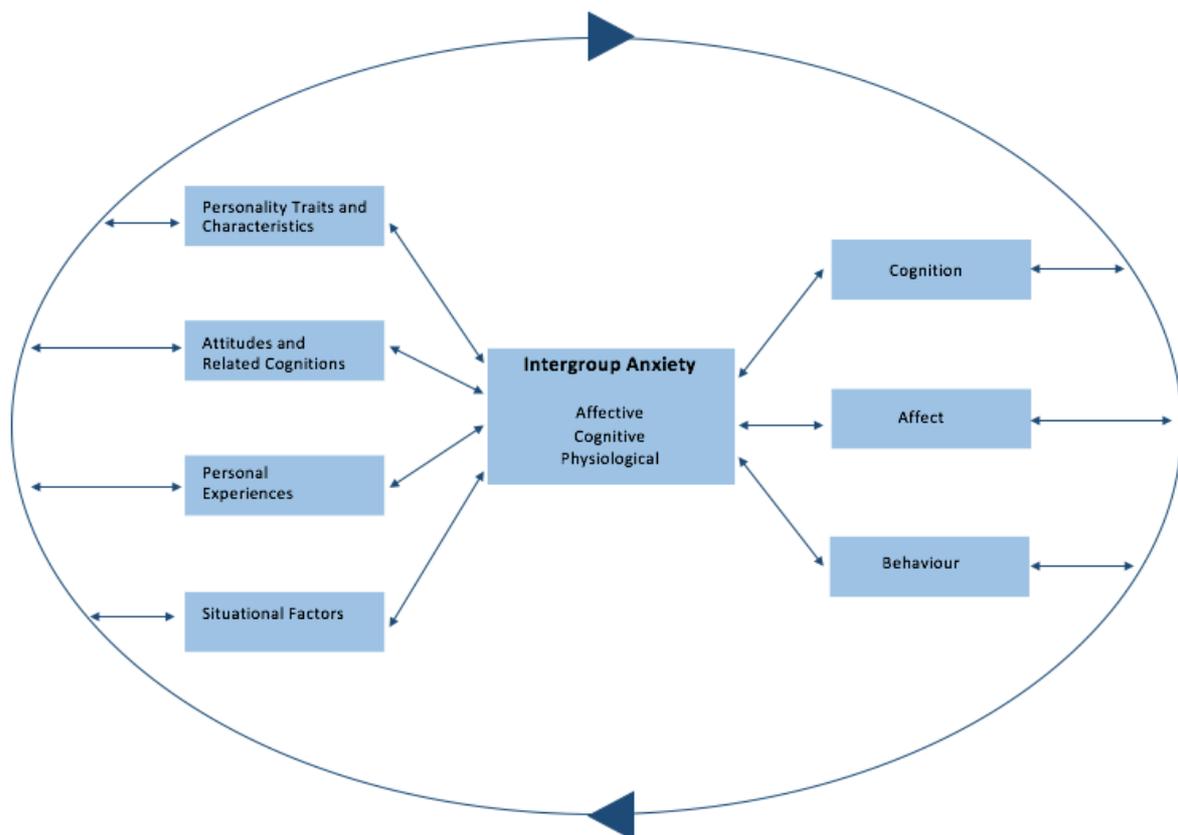
*Proposition 7:* Groups that participate in collaboration projects and that face competition are more likely to show prejudiced behaviour towards the other participating groups, even if these are not involved in the competitive situation.

#### 6.4. Intergroup Anxiety and Prejudice

“Intergroup anxiety is a type of anxiety that people experience when anticipating or engaging in intergroup interactions” (Stephan 2014, p. 240). The concept of intergroup anxiety, which was developed by Walter G. Stephan and Cookie Stephan (1985), facilitates insights into the difficulties that arise from interactions between ingroup and outgroup members. Intergroup anxiety is caused by either specific outgroups or by outgroups in general. It can also arise through specific circumstances that result from the situation of intergroup interaction.

In contrast to the before presented theories, intergroup anxiety is a broader concept which can be applied to a large variety of situations. Even though the theories are not explicitly mentioned, the principles of social identity theory, relative deprivation theory, and realistic conflict theory belong to the contents of this basic model.

In a current paper, Walter G. Stephan (2014) suggested that intergroup anxiety includes affective, cognitive and physiological components. Their existence and extent is dependent on one or several of the following factors: (1) personality traits and related personal characteristics, (2) negative attitudes and related cognitions, (3) personal experiences, and (4) situational factors. Finally, intergroup anxiety has an impact on one’s cognition, affect and behaviour. Thus, in the model provided by Stephan (2014), intergroup anxiety serves as a mediator between its antecedents and its consequences. These origin and resulting factors influence both each other and intergroup anxiety in a reciprocal manner, which results in a complex model. An illustration of this can be found in *Figure 6.4.* below.



*Figure 6.4.:* A theoretical model of intergroup anxiety.  
 Source: Stephan, Walter G. 2014. “Intergroup anxiety: Theory, research, and practice”.  
*Personality and Social Psychology Review* 18 (3): 239-255.

In order to better understand the model’s different categories and variables, the following section has the purpose of explicating its components in order to understand how intergroup

anxiety develops and what its consequences are. As for the previously presented theories, particular emphasis is placed on the relation between intergroup anxiety and prejudice. To not unduly prolong the part about intergroup anxiety, the focus lies exclusively on theoretical assumptions. However, the paper by Walter G. Stephan (2014) is highly recommended if one wishes to complement theory by the respective research findings. Furthermore, it should be pointed out that the intergroup anxiety's antecedents receive more attention than its consequences, since the latter will be elaborated on in detail in chapter 7 which is about the consequences of prejudice.

Intergroup anxiety in itself includes affective, physiological, and cognitive components, whereby the former represents the most important one. Considering the affective component, intergroup anxiety describes a state in which people feel uncomfortable. The situation of interacting with people from outside their ingroup is perceived as negative and worrying. This is also why intergroup anxiety can be accompanied by high blood pressure and other physical reactions of the body that are caused by experiencing discomfort and despair. Looking at intergroup anxiety from a cognitive perspective, people expect the intergroup interaction to result in negative outcomes (Stephan 2014). One of the following four reasons can lead to these expectations (Stephan and Stephan 1985). People are concerned with that they are not accepted by outgroup members, but instead being embarrassed or ridiculed, which makes them feel exposed. But it is not only negative psychological outcomes that people are scared of, it is also negative behavioural consequences. Due to people's unawareness about the outgroup's distinct behavioural norms, they are worried about being mistreated by outgroup members. A further reason for intergroup anxiety is the concern about the expression of a negative opinion from outgroup members towards the people. Finally, people worry about being rejected by their own ingroup when they interact with outgroup members. The affective, cognitive and physiological components mutually influence each other.

As mentioned before, four types of factors can result in intergroup anxiety. These are presented in the following.

(1) People that possess certain kind of characteristics are more inclined to perceive the interaction with outgroup members as negative. This includes characteristics that result in a person being "prejudiced, ethnocentric, mistrustful, intolerant of ambiguity and uncertainty, lacking in self-confidence, low in empathy, low in cognitive complexity, and hostile or aggressive" (Stephan, 2014, p. 243). People that possess these or related traits are more likely to experience intergroup anxiety. Conversely, people that do not possess these kind of traits are less likely to experience intergroup anxiety. In addition, the identification with one's own social group contributes towards the experience of intergroup anxiety. That is, the more one identifies with one's ingroup, the more likely he or she is to be anxious about interactions with outgroup members (cf., social identity theory, section 6.1.; Stephan 2014). The fact that it is the same personality traits that lead to a person being prejudiced and anxious about intergroup interaction, highlights the close correlation between prejudice and intergroup anxiety. This makes it very likely that one cannot exist without the other, meaning that any personality trait which results in intergroup anxiety will also result in prejudiced attitudes towards the outgroup. Therefore, the following proposition about personality traits, prejudice and intergroup anxiety with regard to interorganizational collaboration can be made.

*Proposition 8:* The higher participants in interorganizational projects score on characteristics that are associated with intergroup anxiety, the more likely they are to experience feelings of discomfort when anticipating or interacting with members of other organizations than their

own, and, thus, the more likely they are to develop prejudice against other organizations and their members.

(2) A second cause for intergroup anxiety are negative attitudes that lead to negative expectations with regard to the engagement in intergroup interactions. These attitudes arise from rules and standards established by the ingroup (Stephan 2014). As we know from social identity theory, ingroup members are of particular importance for a person, which is why they can decisively shape a person's beliefs, attitudes, and behaviours, which is also referred to as peer influence (Kite and Whitley 2016). This process of influencing each other could also be seen as a process of learning from each other. Due to the fact that intergroup learning can have a significant role with respect to prejudice development, the social learning theory (Bandura 1977, 1986) and its three learning processes should be quickly explained. The first learning process is direct learning, which means that a person receives some kind of reward for behaving in accordance with the social norms of the ingroup. The second process is called observational learning. Thereby, a person learns through observing the ingroup members' attitudes, beliefs, and behaviours. The last process is referred to as vicarious learning, whereby a person observes an ingroup member being rewarded from other ingroup members for some certain kind of attitude or behaviour. Since learning processes are especially effective when they include persons that are of great significance for an individual, it is very likely that ingroup members have a key role in the development of a person's attitudes, beliefs, and behaviours, and thus in the development of prejudice. Therefore, it is likely that the experience of intergroup anxiety by only some members of the ingroup will lead to an increasing amount of members that are anxious about interacting across their group boundaries (Stephan 2014). Furthermore, negative attitudes can also arise from media influence. The communication of certain attitudes and behaviours through different media channels can also be seen as a social learning process. Through mostly unconsciously absorbing these images, media can impact an individual's development of prejudice (Kite and Whitley 2016).

Transferring these causes for negative attitudes and related cognitions and, thus, for intergroup anxiety to interorganizational collaboration, the related prejudices can have different sources. Particular importance should be placed on ingroup members that are not part of the interorganizational project. Since people, before being assigned to the collaboration, did learn a plurality of their attitudes, beliefs and behaviours from members of their ingroup, which includes their organization if they identify with it, these people are likely to reflect their ingroup's social norms. This means that interorganizational collaboration participants whose ingroup members are characterized by prejudiced beliefs and behaviours towards outgroups are generally also more inclined to possess these negative attitudes which could have been internalized through one of the above mentioned social learning processes. This results in the following proposition.

*Proposition 9:* The degree to which people in an organization possess prejudiced beliefs, attitudes, and behaviours towards outgroups serves as an indicator to determine the degree to which an interorganizational collaboration participant from the same organization demonstrates prejudiced beliefs, attitudes, and behaviours towards members from other organizations.

(3) The third factor that is related to intergroup anxiety are personal experiences. This refers to either not having an experience or to a negative experience that has been made with regard

to intergroup contact. The former is accompanied by little or no knowledge about outgroups (Pettigrew and Tropp 2008) and about appropriate behaviour during intergroup interactions, which is followed by a feeling of uncertainty. This, in turn, increases the experience of intergroup anxiety (Stephan 2014).

For interorganizational collaboration, this means that participants who have no prior experience with collaborating with members from different organizations are more likely to feel uncertain about their behaviour towards these members and, thus, are more likely to be anxious about interactions with these. Based on this, the following proposition can be made.

*Proposition 10:* Interorganizational collaboration participants who do not have a prior experience with interorganizational projects are more likely to experience intergroup anxiety and, consequently, to hold prejudiced attitudes towards the interaction with members from other organizations.

On the other hand, people might already have made experiences with respect to intergroup contact, these can be either negative or positive. If negative experiences made people establish a generally negative belief towards contact situations with outgroup members, it is very likely that the people are strongly affected by negative expectations towards future cross-group interactions (Stephan 2014). Thus, self-fulfilling prophecy can play a major role in intergroup anxiety. Because of the fact that one's expectations influence one's interpretations of situations in a way that is favourable towards seeing what one is expecting to see, it is likely that people with negative intergroup interaction experiences will relive past interactions when encountering outgroup members. The people's own negative attitudes and behaviours influence the behaviour of their interaction partners, which in turn makes these partners behave in a manner that confirms the people's negative expectations (Klein and Snyder 2003). On top of this, people who have established beliefs about others filter the available information in a manner that allows them to particularly focus on these occurrences that confirm their previous assumptions. In short, people's biased interpretation and selective memory will most likely lead to a confirmation of their prejudiced attitudes (Yzerbyt and Corneille 2005).

For interorganizational collaboration, this means that participants with previously negative experiences with regard to cross-organizational projects are more likely to expect negative outcomes and, thus, are more likely to be anxious about the collaboration with members from other organizations. Self-fulfilling prophecy and information selection contribute to an increased anxiety towards interorganizational collaboration. This results on the following proposition.

*Proposition 11:* Participants in interorganizational collaborations that possess prior negative experiences with regard to this kind of projects or generally with regard to the interaction with other organizations' members are more likely to have negative expectations towards cross-organizational collaborations and, thus, are more likely to hold prejudiced beliefs about the interaction with members from other organizations, which in turn results in increased intergroup anxiety.

(4) The fourth trigger for intergroup anxiety are situational factors that negatively impact a person's emotional state and perception. These situations include, inter alia, the previously mentioned circumstances with regard to the theories of relative deprivation (section 6.2.) and realistic conflict (section 6.3.). While the former results in a feeling of dissatisfaction when

comparing one's own situation with that of others and, thus, leads to a feeling of anger and injustice, the latter is accompanied by an individual's perception of competition followed by rivalry between ingroup and outgroup. Both situations provoke negative attitudes and negative expectations towards the interactions with outgroup members and, therefore, result in increased intergroup anxiety. Additionally, uncertainty about a person's role during the situation of interaction, as well as about other's expectations towards the person's behaviour raise concerns about contact across the ingroup border. Finally, occurrences that are accompanied by a feeling of uneasiness, such as "unfriendly behaviour, arguments, misunderstandings, rudeness, lack of respect, [or] acts of discrimination or aggression" (p. 245) can cause people being anxious about intergroup contact (Stephan 2014).

This means for interorganizational projects that any kind of situation that makes the participants experience a feeling of discomfort, uncertainty, or related negative perceptions, makes increased intergroup anxiety more likely. Thus, these situations provoke prejudiced attitudes towards outgroup members. Based on this, the following proposition is made.

*Proposition 12:* Situational factors that negatively impact the interorganizational collaboration participants' perceptions about cross-organizational contact are likely to be followed by increased intergroup anxiety and, thus, by prejudice against interactions with members from other organizations than one's own.

The four previously described factors can result in intergroup anxiety including affective, physiological, and cognitive components. The consequences of intergroup anxiety entail effects on a person's affect, behaviour, and cognition. Since a separate section will be dedicated to the potential consequences of prejudice on interorganizational collaboration (see chapter 7.), it will be not further elaborated on these three consequences at this point of the thesis.

To conclude, intergroup anxiety constitutes an important part for the development of prejudice against outgroups (Stephan & Stephan 1984, 1985). This means, in turn, that causes for intergroup anxiety (i.e., personality traits and related personal characteristics, negative attitudes and related cognitions, personal experiences, and situational factors) are also causes for prejudice, and that consequences of intergroup anxiety (i.e., effects on a person's cognition, affect, and behaviour) are also consequences of prejudice, which is why the subchapter about intergroup anxiety plays a central role in understanding how participants in interorganizational collaborations start to develop negative beliefs towards cross-organizational interactions, and in the worst scenario even start to act on the basis of these beliefs. However, holding prejudiced beliefs does not automatically lead to prejudiced behaviours, since one needs to differentiate between stereotype activation and stereotype application, as it was previously explained in chapter 5.

## 6.5. Summary

This section serves the purpose of providing the reader with a quick overview about the contents of the four previously presented theories and the respective propositions that were made. These form the basis for the subsequent chapters of the thesis.

**Social identity theory** is concerned with the categorization process that leads to the distinction between ingroup and outgroup, and therefore forms the basis for the other theories. It was explained that even the most minimal conditions can lead to this distinction,

which is referred to as the minimal group paradigm. Through identifying with a specific social group, individuals assign themselves to this group and receive a social identity. It is assumed that employees identify with their organization, and therefore assign members of this organization to their ingroup, while members of other organizations are assigned to the outgroup. Moreover, social identity theory contains the categorization-competition hypothesis which argues that the mere act of social categorization leads to perceived intergroup competition, and therefore results in negative attitudes (i.e., prejudice) towards outgroup members. This, in turn, is followed by ingroup-favouritism, which means that members of one's ingroup receive a preferential treatment compared to outgroup members. Furthermore, the self-esteem hypothesis in combination with one's social identity results in the need of the creation of a positive social identity. This is done by comparing one's ingroup with the outgroup based on comparison methods that make their own group look better than the outgroup. In conclusion, the mere self-categorization process is assumed to be sufficient to develop a prejudiced attitude towards outgroup members. In the organizational context this means, that the self-identification with one's own company is sufficient to develop negative attitudes towards members from other organizations.

*Proposition 1:* When an individual identifies with its organization, it defines itself in terms of group membership and receives a social identity. Through self-categorization and the identification with a specific social group—one's organization—, one starts to differentiate between members of one's ingroup (i.e., one's own organization) and members of the outgroup (i.e., other organizations). Based on this differentiation they start to develop stereotypic beliefs about, and certain attitudes towards members that belong to the outgroup.

*Proposition 2:* Individuals perceive the differences between their ingroup and the outgroup as greater than they actually are, which results in an intensified distinction between ingroup and outgroup members, and thus leads to a feeling of competition between the members of different organizations.

*Proposition 3:* This distinction between members of one's own organization and members of other organizations and the perceived feeling of competition leads to ingroup-favouritism, whereby ingroup members receive preferential treatment compared to outgroup members.

*Proposition 4:* The need for enhancing one's self-esteem, which includes to achieving and maintaining a positive social identity, leads to relative comparisons between the ingroup and some relevant outgroups. Thereby, individuals choose such comparison variables and methods that make their own group look better than the other groups. Consequently, members of an organization strive for a more positive portrayal of their own organization in comparison with other organizations.

**Relative deprivation theory** states that the perception that the outgroup is responsible for the ingroup's deprivation (i.e., the feeling of being deprived relative to one's expectations or relative to the situation of people of other social groups) leads to antipathy against outgroup members. Moreover, also relative gratification (i.e., the feeling of being in a superior position relative to people of other social groups) leads to negative beliefs about outgroup members in order to justify one's superior position. Thus, both relative deprivation and relative gratification serve as motives for hostility and prejudices against the outgroup. It is therefore

solely the perception of equality between the ingroup and outgroup that prevents the emergence of negative emotions and prejudiced reactions.

*Proposition 5:* When interorganizational collaboration participants are able to compare characteristics of their own organization with the ones from the collaboration partner, this comparison can lead to two different reactions. The first one is caused by either feeling relatively deprived or relatively gratified when comparing the own organization's with another organization's situation, which is followed by negative attitudes and prejudiced reactions towards other organizations. The second reaction does not result in motives for prejudice, since one is perceiving the compared organizations as having equivalent outcomes.

**Realistic conflict theory** is only relevant for those interorganizational collaborations whose prehistory is marked by competitive relations between the participating organizations. It explains that prejudices arise through the competition of different social groups for the same resources. Outgroup members are perceived as a threat to the obtainment of these resources, which is why they start to develop negative attitudes towards outgroup members. Once these attitudes are developed, it is only under specific circumstances that these can be changed again. Furthermore, the subchapter also included the carry-over effect of competition. This effect causes that a competitive situation between an ingroup and outgroup can even lead to prejudiced attitudes towards uninvolved third groups, which indicates that the perception of competition increases the general likelihood of prejudiced attitudes towards any outgroup.

*Proposition 6:* If interorganizational collaboration includes groups that previously had a competitive relation to each other, it is likely that the initial situation of the collaboration is characterized by hostility and prejudice between the participating organizations.

*Proposition 7:* Groups that participate in collaboration projects and that face competition are more likely to show prejudiced behaviour towards the other participating groups, even if these are not involved in the competitive situation.

Finally, **intergroup anxiety** is a term that describes people's experience of anxiety when they anticipate or engage in intergroup interactions. It is a concept that is developed in order to better understand the potential challenges that are accompanied by interactions between ingroup and outgroup members. It is suggested that intergroup anxiety includes affective, cognitive and physiological components that are dependent on four factors, which are, firstly, personality traits and related personal characteristics, secondly, negative attitudes and related cognitions, thirdly, personal experiences, and fourthly, situational factors. The tight connection between intergroup anxiety and prejudice was explained, in order to demonstrate that origins of intergroup anxiety are also origins of prejudice, and that consequences of intergroup anxiety are also consequences of prejudice.

*Proposition 8:* The higher participants in interorganizational projects score on characteristics that are associated with intergroup anxiety, the more likely they are to experience feelings of discomfort when anticipating or interacting with members of other organizations than their own, and, thus, the more likely they are to develop prejudice against other organizations and their members.

*Proposition 9:* The degree to which people in an organization possess prejudiced beliefs, attitudes, and behaviours towards outgroups serves as an indicator to determine the degree to which an interorganizational collaboration participant from the same organization demonstrates prejudiced beliefs, attitudes, and behaviours towards members from other organizations.

*Proposition 10:* Interorganizational collaboration participants who do not have a prior experience with interorganizational projects are more likely to experience intergroup anxiety and, consequently, to hold prejudiced attitudes towards the interaction with members from other organizations.

*Proposition 11:* Participants in interorganizational collaborations that possess prior negative experiences with regard to this kind of projects or generally with regard to the interaction with other organizations' members are more likely to have negative expectations towards cross-organizational collaborations and, thus, are more likely to hold prejudiced beliefs about the interaction with members from other organizations, which in turn results in increased intergroup anxiety.

*Proposition 12:* Situational factors that negatively impact the interorganizational collaboration participants' perceptions about cross-organizational contact are likely to be followed by increased intergroup anxiety and, thus, by prejudice against interactions with members from other organizations than one's own.

## 7. Consequences of Prejudice for Creativity and Ideation

This chapter has the purpose of answering the second research question (i.e., how do prejudices impact group creativity in ideation processes?) by explaining in detail what negative consequences prejudices have on the work group and its creativity, and thus, how they lead to processes losses and the incomplete exploitation of the group's existing creative potential. The chapter starts by providing the reader with knowledge about the idea generation process, since this is the process that is assumed to require the highest degree of creative thinking, and therefore forms the basis for analysing the effects of prejudices on group creativity. Thereafter, the focus lies on group processes and their influence on the group's performance. It includes the group composition which determines the group's potential and emphasizes the importance of the work group members' interactions and the members' mutually interdependence. The third subchapter is concerned with a detailed explanation of the negative consequences that prejudices have on group creativity in the ideation process and concludes with a summarizing figure. Finally, the last section is based on the previous ones and illustrates the generally contrary nature of creativity and prejudice.

### 7.1. Idea Generation as Part of the Creative Process

A creative process is a method for solving any problem that calls for ideas (Osborn 1963). Throughout the years, several authors suggested different models to describe the optimal procedure for creative problem solving. For instance, David and Arthur Cropley (2010) proposed a model with seven phases, Alex F. Osborn (1963) argued for a model with three phases, and still others, such as Graham Wallis (1926) presented a four-phase model, which was also presented in section 4.5.3. Even though there is no universal model that fits all creative problem-solving processes (Fox and Fox 2010), some contents are seen as integral parts of a creative process. One of these is idea generation which serves the purpose of generating as many ideas as possible for the problem to be tackled. A fundamental principle of this approach is that quantity is more important than quality (Plicker and Makel 2010). This is firstly based in the endeavour to not miss any possibility to solve the problem, and secondly on the notion that any idea can be seen as a stepping stone to another idea which finally might be the one chosen to solve the problem. Ideation belongs to the tasks that require divergent thinking, meaning that one is trying to illuminate the problem at hand from different perspectives for the purpose of generating diverse ideas for alternative solutions. Convergent thinking is also part of the creative process, but is more related to evaluation methods based on facts, and therefore not relevant for idea generation (Milliken, Bartel and Kurtzberg 2003). In order to explore new perspectives on the problem, various activities or methods that yield creative cognitive processes can be used. Different kinds of stimuli serve the purpose of activating diverse parts of one's totally available knowledge (Byrge and Hansen 2014). This is in accordance with the before mentioned notion that existing knowledge plays a key role with regard to creativity (see section 4.2.). Therefore, outcomes of ideation processes are dependent on the participating individuals' knowledge, on the extent to which this knowledge can be accessed, and how the knowledge is combined (Cropley 1999; Feldhusen 1995; Mumford and Gustafson 1988; Sternberg and Lubart 1995). An overview about the 10 basic strategies to trigger new ways of thinking and generate new ideas can be found in the paper written by Victor E. Ross (2006) who also emphasized the importance of experimentation in relation to the generation of creative ideas. With regard to this, Thomas B. Ward and Yuliya Kolomyts (2010) claimed that one cannot make factually grounded recommendations for

appropriate methods for a specific creative process, since the emerging ideas cannot be known beforehand. They explain the emergence of novel ideas through conceptual combination which describes the mentally merged combination of ideas that previously existed independent from each other. Nevertheless, the probably most widely known and applied method to generate ideas is the classical group brainstorming introduced by Alex F. Osborn (1957). However, as it is known from section 4.7. (see Paulus and Yang 2000), certain conditions must be met that outcomes of group brainstorming can outperform the amount and quality of ideas produced by the same number of individuals working independently. These creative outcomes, as it was already explained in section 4.7. about group creativity, of the ideation process are very likely to be assessed on the basis of the five criteria, fluency, flexibility, novelty, usefulness (Woodman, Sawyer and Griffin 1993), and elaboration of ideas (Plucker and Makel 2010), which already were briefly explained in section 4.7. about group creativity in relation to the assessment of a group's creative performance.

In conclusion, the outcomes of idea generation are highly dependent on the knowledge of the participating individuals and the contributions they are making in order to reach progress. The latter in turn, highly depends upon the individual's ability and motivation to generate new ideas, and communicate them with the group, which requires an environment without severe constraints (West 2002). The sum of the different contributions is of immense importance in order to have greater possibilities for idea combinations, because a higher quantity also results in a greater chance to achieve qualitative solutions. Considering these task characteristics and using the classification of Ivan D. Steiner (1972), idea generation can be said to be a maximizing additive task, since the group's success is dependent on the contributions of each individual.

## 7.2. The Impact of Prejudice on Group Processes

In this thesis, interorganizational collaboration refers to the agreement between at least two organizations to deliberately form a group including members from each of the involved organizations for making these members work towards a common purpose by regularly interacting with each other. Since it is very likely that group members did not assign themselves to the group, but rather were assigned by superiors, the considered groups with regard to interorganizational collaboration are more specifically termed as concocted groups. A group's most important component are the people who belong to that group. These people's experiences, knowledge, abilities and skills decide about the group's potential to process the task they are confronted with. Therefore, it is important to carefully select the people for a work group to provide the group with the best possible starting position. However, it is finally not the group's general potential that will decide about its success, but rather the emergent processes during the collaboration (Arrow, McGrath and Berdahl 2000). Regarding this, Steiner (1972) presented the following formula:

$$\text{Actual Productivity} = \text{Potential Productivity} - \text{Process Losses.}$$

Since in our case, productivity refers to the idea generation process and the degree to which group members are creative in that process, we can reformulate the before presented equation in the following way (c.f., Nijstad and Paulus 2003):

$$\text{Actual Group Creativity} = \text{Potential Group Creativity} - \text{Process Losses.}$$

This means that even though a concocted group generally might have the potential to be highly creative, this potential is not automatically realized. To what extent it is realized depends to high degree on the group's process, which "includes all those intrapersonal and interpersonal actions by which people transform their resources into a product, and all those non-productive actions that are prompted by frustration, competing motivations, or inadequate understanding" (Steiner 1972, p. 8). Thus, any action that is taken impacts the process and therefore the group's final performance. Special emphasis should be put on the influence the group members have on one another through their regular interactions. Their attitudes and behaviours are mutually interdependent, wherefore negative behaviours emanating from only one person of the group can have consequences for the entire group. This means that negative emotions and related affective states within the work group, which negatively impact the performance of some or more members of the group can inhibit productivity, and thus creativity, and will result in a task solution that did not reach the group's available performance potential (Steiner 1972). According to Arrow, McGrath, and Berdahl (2000) groups have two basic functions. Firstly, to fulfil their common mission, and secondly, to fulfil member needs. They further elaborate that these two purposes are related to a third one which is the maintenance of the group's integrity which is a necessary condition to complete the task in a manner that is entirely using the group's potential. The three group purposes are interrelated and each of them is necessary to maintain the group's internal cohesion. Therefore, the members' individual goals must be in alignment with the group's common mission to ensure the group's viability. Nevertheless, it can happen that a person's individual need is not compatible with the overall group goal. For example, considering chapter 5 about stereotype activation and stereotype application and the presented motivational goals that can increase the likelihood of stereotyping, such as comprehension goals and self-enhancement goals, the fulfilment of these personal goals can lead to prejudice, and thus result in a negative impact on the accomplishment of the group's task. How exactly prejudice hamper the overall mission (i.e., idea generation) will be elaborated in detail in the following subchapter. Furthermore, Brown (2000) states that "the process of becoming part of a group often provokes anxiety" (p. 25). He explains this oppressive feeling through being confronted with 'something unknown'. Moreover, especially in concocted groups that have been formed by external agents, the assigned members are concerned about how to behave in order to comply with other's expectations (Arrow, McGrath and Berdahl 2000). These concerns, as it was explained in section 6.4., are followed by a feeling of uncertainty which, in turn, leads to an increased experience of intergroup anxiety. This means that the engagement with people from other organizations or merely its anticipation can lead to a feeling of discomfort. Thus, the concocted group's initial conditions, and therefore the initial conditions of interorganizational collaboration groups, are characterized by having members that are anxious towards interactions with people from other organizations, and consequently are characterized by members holding prejudice against each other. Arrow, McGrath and Berdahl (2000) claim that a group's starting point and relevant occurrences at the beginning of a group's formation can decide about the direction in which the group develops. In addition, they especially highlight the importance of these initial conditions for groups whose members did not work together before, as well as for those with individuals that join the group with a feeling of anxiousness and uncertainty, which most probably is the case for groups being formed for interorganizational collaborations.

Considering the group's developmental stages provided by Tuckman (2013), small groups should go through five phases in order to work effectively; these are, forming, storming, norming, performing, and finally adjourning. Nevertheless, in most organizational contexts,

groups are forming and performing at the same time, due to the fact that the first three processes require both money and time, and have no measurable or presentable outcomes, which is what the overall collaboration is established for. This means that members of interorganizational groups do not have sufficient time to seek out for individuating information about other organizations' members, but instead are almost right from the beginning of the collaboration mentally busy with the task at hand. This cognitive busyness can either reduce stereotype activation or, under the assumption a stereotype is already activated, can reinforce stereotype application (see subchapters 5.1. and 5.2.). While the former is desirable, the latter is not. The formation phase of a group serves also the purpose to establish a functional entity by creating linkages between the group's member, and finally terminate this phase with the existence of a cohesive group with fixed boundaries (Milliken, Bartel and Kurtzberg 2003). However, when the formation and performance stages are starting at the same time, the existence of prejudice against people from other organizations than one's own can inhibit that the collaboration group is perceived as an entity by the collaboration participants. This is because holding prejudice is related to a negative evaluation of other organizations, which makes it likely that one strives for a clear differentiation between one's own and other organizations. Therefore, even though the collaboration group might be perceived as an entity from the outside, members within this group try to maintain the differentiation between their own and other's organization, which does not result in a bounded entity, but rather in two or more subgroups barely cooperating, and preferring to work independently from each other. Thus, the collaboration participants do not perceive the project's members as a socially linked group.

Furthermore, there are other contextual factors that negatively influence the group's formation phase, such as a tense interaction situation between the members, their feeling of dissatisfaction in relation to some aspect of their lives, and the members' perception of threat or uncertainty (Arrow, McGrath and Berdahl 2000). These three situations are closely related to the before presented theories and concepts (see chapter 6), including intergroup anxiety, relative deprivation theory, realistic conflict theory, and therefore also integrate social identity theory. This indicates the significance of these theories right from the beginning of a group's development and, thus, their significance for the initial meetings between the organizations that participate in a collaboration. Finally, it can be said that a group is a complex dynamic social system, which derives from, firstly, the various layers (e.g., individual level, group level, organizational level) and contexts (e.g., cultural, temporal, organizational) it is embedded in, secondly, the group's unpredictable development arising from the reactions to different kind of changes both within and outside of the group, and thirdly, from the strong interconnection between the group's members, its resources, and its tasks (small groups as complex systems). Despite this complexity which requires a holistic analysis including every potential factor that influences the group and its performance, the following subchapter exclusively concentrates, *ceteris paribus*, on the impact of group diversity and therefore also on the impact of prejudice against collaboration partners, and their consequences on the members' cognitive and affective processes in relation to the idea generation procedure.

### 7.3. The Impact of Prejudice on Creativity and Ideation in Interorganizational Groups

Group diversity is said to be one of the most important group characteristics that determines the group's creative potential, and thus influences the group's success (e.g., Choi and Thompson 2012; West, Sacramento and Fay 2012; Paulus 2000; Nijstad and Paulus 2003).

Paulus and Nijstad (2003) stressed the diversity's importance with the following statement: "In fact, if it were not for diversity, there would be no point in creative collaboration" (p. 328). This is exactly what organizations strive to make use of when establishing collaborations with other organizations. Nevertheless, diversity is also viewed as a major obstacle for thinking creatively which is particularly necessary for a group's idea generation process (e.g., Milliken, Bartel and Kurtzberg 2003). However, it is not diversity per se that forms a barrier, but rather the negative psychological processes it triggers. On one hand, group members' diversity results in a generally higher creative potential for the group due to the fact that the members cognitively stimulate each other with their diverse knowledge, experiences, and abilities. Therefore, the group's ideation outcomes are characterized by a greater variety of different ideas compared to more homogeneous groups. On the other hand, diversity is considered to lead to several social and emotional processes that inhibit group creativity (e.g., Milliken, Bartel and Kurtzberg 2003; Williams and O'Reilly 1998). Thus, thinking back to the presented equation in which the degree of process losses decides about whether and to what extent a group's creative potential is realized (see section 7.2.), different cognitive and affective reactions to the group's diversity seem to play a major role with regard to these process losses, and, consequently, with regard to the group's realized potential.

As it was previously explained, diversity can take many forms and includes both detectable (e.g., gender, ethnicity, age) and unobservable (e.g., education, experience, knowledge) differences. In the following, diversity refers to differences in organizational affiliations which can be said to be inbetween these distinguishing features, since, even though not directly observable, it is likely that people in organizational collaborations are aware of whether a participant belongs to their own organization or not. Chapter 6 included a number of propositions regarding the interconnection between differences in organizational affiliation and prejudice (see section 6.5. for an overview). Thus, it can be concluded that prejudice arises through individuals categorizing their environment based on their perceived differences between people, which in turn results in different attitudes towards these people depending on their group affiliation. This means that diversity with regard to organizational affiliation results in people holding a different attitude towards members of their own organization—the ingroup—compared to members of other organizations—the outgroup—. Due to the just presented reasoning, the various negative consequences for the idea generation process executed by interorganizational groups resulting from negative affective reactions which are provoked by group diversity, are partly attributable to prejudice. Therefore, it is assumed that negative effects on creativity caused by diversity, are also caused by intergroup prejudice.

Milliken, Bartel, and Kurtzberg (2003) illuminate the importance of social categorization with regard to creative collaboration groups. They state that members of such a work group which meet for the first time, assign the other participants to different social categories based on, for example, their organizational memberships. Forming an ingroup and one or several outgroups will automatically lead to ingroup-favouritism (see section 6.1.), which means that ideas and opinions presented by persons from one's own organization will get a preferential treatment compared to those from other organizations' members. The accessibility principle presented by Nijstad, Rietzschel and Stroebe (2012) (see also section 4.7.1.) stresses the importance of paying attention to other people's shared ideas in order to be stimulated by these and produce new ideas. This is also supported by Dugosh, et al. (2000) who emphasise that careful attention is a necessary condition to reap the benefits of group ideation processes. However, ingroup-favouritism can result in increased attention for ingroup members' contributions while other organizations' contributions receive only little or

no attention. Consequently, potential stimulators for new ideas are ignored, which results in process losses. The categorization of others and oneself into social categories is comparable to what Byrge and Hansen (2014) termed as 'social masks'. Wearing a social mask means that people see themselves and want to be seen as belonging to a certain group. According to them, task focus is one of the four required conditions to fully make use of one's creative potential, which is also supported by Paulus, Nakui and Putman (2012). Byrge and Hansen (2014) claim that task focus is only possible when people remove their social mask and are completely themselves without thinking about their and others' affiliation to a certain group. Only on this basis, it is possible to access the entire knowledge at one's disposal, think creatively, and activate chains of associations that lead to new ideas after being exposed to stimuli. However, since prejudice is based on social categorization processes and, thus, based on people wearing social masks, prejudice inhibits task focus, and therefore also inhibits group creativity. This proposition indirectly receives further support by Pohl, et al. (2013) who stated that intergroup anxiety requires cognitive resources which, in turn, means that the existence of intergroup anxiety leads to a reduced availability of cognitive resources for other tasks, such as idea generation. Due to the fact that prejudice arise from intergroup anxiety, it is logical to assume that the existence of prejudice does also reduce the availability of cognitive resources. Through having a shared focus between holding prejudice and completing the task (i.e., generating ideas), and thus having less cognitive resources available for thinking creatively, existing creative potential cannot be fully realized.

Furthermore, social categorization, the distinction between the ingroup and outgroup, and the related development of prejudice result in perceived competition between members belonging to different social groups, which in turn leads to a massive loss of trust between the subgroups within the collaboration. This distrust causes that collaboration participants do not identify with the collaboration group as a whole, but rather prefer to assign themselves to one of the existing subgroups (Brewer 1995; Hogg and Abrams 1988). Especially when people perceive each other as being different, as it is true for differing organizational affiliation, accepting the entire collaboration participants and oneself as a common entity is difficult (Milliken and Martins 1996). This acceptance is significantly easier when similarities between the people are noticed more strongly than differences are (Newcomb 1961). Moreover, the perception of similarities between people within a group makes group mates more likable and facilitates collaboration between the members (Brewer and Kramer 1986; Kramer 1993). Through less identification with the group as a whole, the participants are generally less motivated to complete the task which is made apparent by people's minor contribution to progress (Milliken, Bartel and Kurtzberg 2003). Motivation is of great importance for productive idea generation in groups (Paulus, Nakui and Putman 2012), as well as for creativity in general, since a person's motivation determines the extent to which a person uses his or her existing creative potential (Hennessey 2010; Amabile 1996). This motivation has a major role with regard to the before mentioned effective sharing principle which is part of the four principles for creativity presented by Nijstad, Rietzschel and Stroebe (2012; see also section 4.7.1.). It is about the importance of open interactions within the group, meaning that group members should feel comfortable to communicate their ideas and opinions to the other collaboration participants. For an effective process, people need to possess both the motivation and the ability to openly share their thoughts. However, not identifying with the work group as a whole and the existence of subgroups within the project group can reduce people's motivation and ability to share their knowledge. Distrust and discomfort complicate open communication between the collaboration participants, which leads the people to feel less satisfied with the group they are assigned to. This, in turn, is followed by a group climate

that is detrimental for one's perception of psychological safety, and therefore also for creativity (Edmondson 2002; West 1990). The experience of psychological safety is of immense importance for creative groups to realize their existing potential. Psychological safety is characterized by a group climate that allows people to feel comfortable when sharing their ideas and opinions because people will react in a positive and constructive manner (Edmondson 1999). This does not mean that group members agree on everything, but rather that they encourage every kind of contribution to reach progress. The individuals feel that their ideas and opinions are valued and do not have to be afraid of derogatory remarks or negative evaluations in general. Psychological safety is not to be equated with the absence of conflict, but it allows conflict to be resolved in a more productive manner (Barsade, Gibson and Putzel 2001). Feeling psychologically safe is comparable to not feeling negatively evaluated which is equivalent to the principle of no experienced judgement which is an essential condition for group creativity according to Byrge and Hansen (2014). However, cognitive differentiation between ingroup and outgroup and the related prejudices hamper the development of an environment that is perceived as psychologically safe and lead to an oppressive feeling and a cautious behaviour of collaboration participants, and therefore also to limited group creativity. This is due to the fact that holding prejudice can negatively impact both people's interpretations of situations and their behaviour. Stereotyping leads to biased interpretations of ambiguous situations which most likely confirm the existing negative beliefs and attitudes (Kite and Whitley 2016), which is also supported by several studies (e.g., Duncan 1976; Darley and Gross 1983). Moreover, as it was previously explained, negative beliefs towards the outgroup result in specific expectations with regard to its members' behaviour which in turn can lead to self-fulfilling prophecy. This means that there is a likelihood that negative expectations towards cross-group interactions will prove true, since these expectations are followed by biased interpretation and information selection processes that support one's initial negative expectations. This negative perception of interactions with members from other organizations inhibits the experience of psychological safety. To conclude, collaboration participants are highly influenced by prejudice which has negative consequences for the group's climate and, thus, for the group's creativity and its realized potential with respect to the idea generation process.

Heterogeneity within a group working on a cognitive task, as previously mentioned, is necessary in order to generate new and original ideas through people's diverse knowledge and experiences. This diversity positively impacts the group's progress as long as disagreements and conflicts are task related, because different opinions and perspectives are required to boost divergent thinking processes and, consequently, creativity. Nevertheless, task conflict and cognitive diversity which generally enhances group creativity can also result in difficulties regarding communication and understanding (Milliken, Bartel and Kurtzberg 2003). This in turn, is followed by emotional conflict which is detrimental to an open and safe group climate (Jehn, et al. 1997). Milliken, Bartel and Kurtzberg (2003) suggested that high levels of emotional conflict can cause a negative mood within the work group. They, furthermore, argued for a close linkage between group members' affective and cognitive reactions, which made them conclude that negative emotions within the group will have harmful consequences on the group's creative performance. In addition, a large number of studies showed that people's emotions influence their judgments, decisions, and memories (Fiske and Taylor 1991; Forgas 1992) and hence influence the group members' engagement in and their approach to the task at hand (Hinsz, Tindale and Vollrath 1997). With regard to this, it is important to note that research came to the conclusion that work groups develop common emotions through the members' regular interactions (Bartel and Saavedra 2000).

Therefore, it can be assumed that negative affective reactions caused by prejudice will impact the overall group emotions in a negative manner, and thus will result in process losses. These adverse effects seem to be inevitable for interorganizational collaborations since Jehn, Chadwick and Thatcher (1997) finalized their research with the conclusion that groups whose members are diverse in one or more apparent characteristics are more likely to experience conflict situations compared to homogeneous groups. Due to the fact that cross-organizational groups differ in at least one salient characteristic—organizational affiliation—it is reasonable to assume that some degree of conflict is inevitable for those work groups. Thus, fully realizing a cross-organizational group’s creative potential constitutes a major challenge. Nevertheless, there are methods to seize the potential of group diversity; these will be presented in detail in chapter 8.

A further issue that is highly relevant for a group’s performance is the members’ score on social anxiety. Research shows that work groups with members who are generally anxious towards social interactions perform poorly compared to those groups whose members are low in social anxiety (Camacho and Paulus 1995). Walter G. Stephan (2014) claimed that anxiety with regard to interactions between members from different social groups is apparent in almost every cross-group context. Therefore, intergroup anxiety is also likely to occur with regard to interorganizational projects. As previously explained, intergroup anxiety and prejudice are closely related, which is why the consequences of intergroup anxiety are also linked to prejudice, and thus impact groups’ idea generation processes (cf., this section and section 6.4.). Hence, one should be aware of the negative effects of intergroup anxiety on one’s cognition, affect, and behaviour. The former refers to the constantly negative evaluation of other organizations’ members, which serves as justification for the existing anxiety. As prior mentioned, intergroup anxiety also impacts one’s cognition by using cognitive resources that otherwise could have been used for generating new ideas. Besides cognitive consequences, intergroup anxiety also impacts one’s affect and emotion. Dependent on the situational context that made anxiety arise (e.g., uncertainty, feeling of deprivation, feeling of competition), people experience different kinds of negative emotions, such as “fear, anger, threat, dread, embarrassment, humiliation, frustration, guilt, or hatred” (Stephan 2014, p. 246). Finally, intergroup anxiety has several behavioural consequences. It can be said that anxiousness about interactions with outgroup members results in generally negative reactions towards these (Stephan 2014). Especially important are those behaviours that both implicitly and explicitly express dislike towards other organizations’ members, since these kinds of interactions could also be noticed by other collaboration participants, which probably results in a negative group climate. Even those people that initially did not possess adverse attitudes towards outgroup members can develop negative beliefs about participants belonging to different organizations on the basis of observing difficult or even dissuasive interactions between ingroup and outgroup members. Moreover, collaboration participants that are anxious about interacting across their ingroup boundaries might try to avoid or hastily finish interactions with outgroup members. In addition, intergroup anxiety can result in a closed attitude and ignorance towards other organizational members, as well as in inattention to their ideas and opinions. Finally, collaboration participants from different organizations with intergroup anxiety have difficulties to understand each other correctly with regard to facial expressions and gestures, they are not willing to help and even might verbally attack each other (Stephan 2014). All this clearly shows that the appearance of intergroup anxiety has far-reaching consequences for a group’s working and idea generation process. Ultimately, one should also be aware of the dynamic interplay between cognitive, affective, and behavioural consequences, which was illustrated in *Figure 6.4.: A Theoretical Model of Intergroup Anxiety*.

Summing it up, group diversity with regard to organizational affiliation generally enables a group to profit from the existing varied range of experience, knowledge, and skills throughout the project. However, this diversity does also impede interactions between members from different organizations. Special emphasis should be put on the group's initial meetings and the mutual exchange of verbal and non-verbal messages. They are an important determinant for the group's subsequent development and process. While cognitive stimulation resulting from diversity boost creativity, the different psychological processes and affective reactions triggered by diversity are detrimental to creativity. Nevertheless, cognitive and affective processes cannot be viewed in isolation from each other, since they are mutually interdependent processes, which is especially true in a group's formation phase.

Existing and noticeable differences between collaboration members almost automatically result in social categorization and the division between ingroup and outgroup members. With regard to organizational affiliation people differentiate between those people that belong to the same organization as they do—the ingroup—and those that belong to any other organization—the outgroup—. This distinction is followed by developing a positive attitude towards ingroup members while holding a negative or, at least, less positive attitude towards outgroup members, which in turn leads to prejudice against the outgroup. The separation between the ingroup and the outgroup is also followed by a phenomenon called ingroup-favouritism. Thereby, members of one's own organization receive a preferential treatment compared to those that are part of other organizations. With regard to the idea generation process, this means that ideas and opinions expressed by ingroup members receive greater attention and greater consideration relative to outgroup members' contributions. Therefore, the potential for cognitive stimulation is not fully realized and process losses occur. Moreover, a divided focus between social categories, prejudice, and idea generation results in the division between cognitive resources, which means that one's existing resources are not completely available for thinking creatively. Consequently, one is not able to exploit one's creative potential to its fullest. Additionally, diversity can lead to distrust between the participating organizations due to an upcoming feeling of competition. Furthermore, the differentiation between organizational groups is followed by less identification with the collaboration group as a whole, which in turn results in people being less satisfied with the work group. All this makes the collaboration participants less motivated to contribute to the group's progress, and it negatively impacts the group climate by experiencing less psychological safety, which makes work group members less likely to express their thoughts. Furthermore, negative emotions experienced by only some collaboration participants are likely to influence the entire group due to the fact that the work group members' attitudes and behaviours are mutually interdependent. Finally, the experience of intergroup anxiety has negative consequences for people's cognition, affect, and behaviour, which results in major process losses. Since motivation, open sharing of ideas and opinions, and attentive listening are crucial to seize the group's creative potential, it becomes obvious that the differentiation between ingroup and outgroup, and the related prejudice strongly inhibit creative thinking, and thus are detrimental to group ideation processes. An illustration of the effects on creativity and idea generation resulting from prejudice can be found below in *Figure 7.3*.

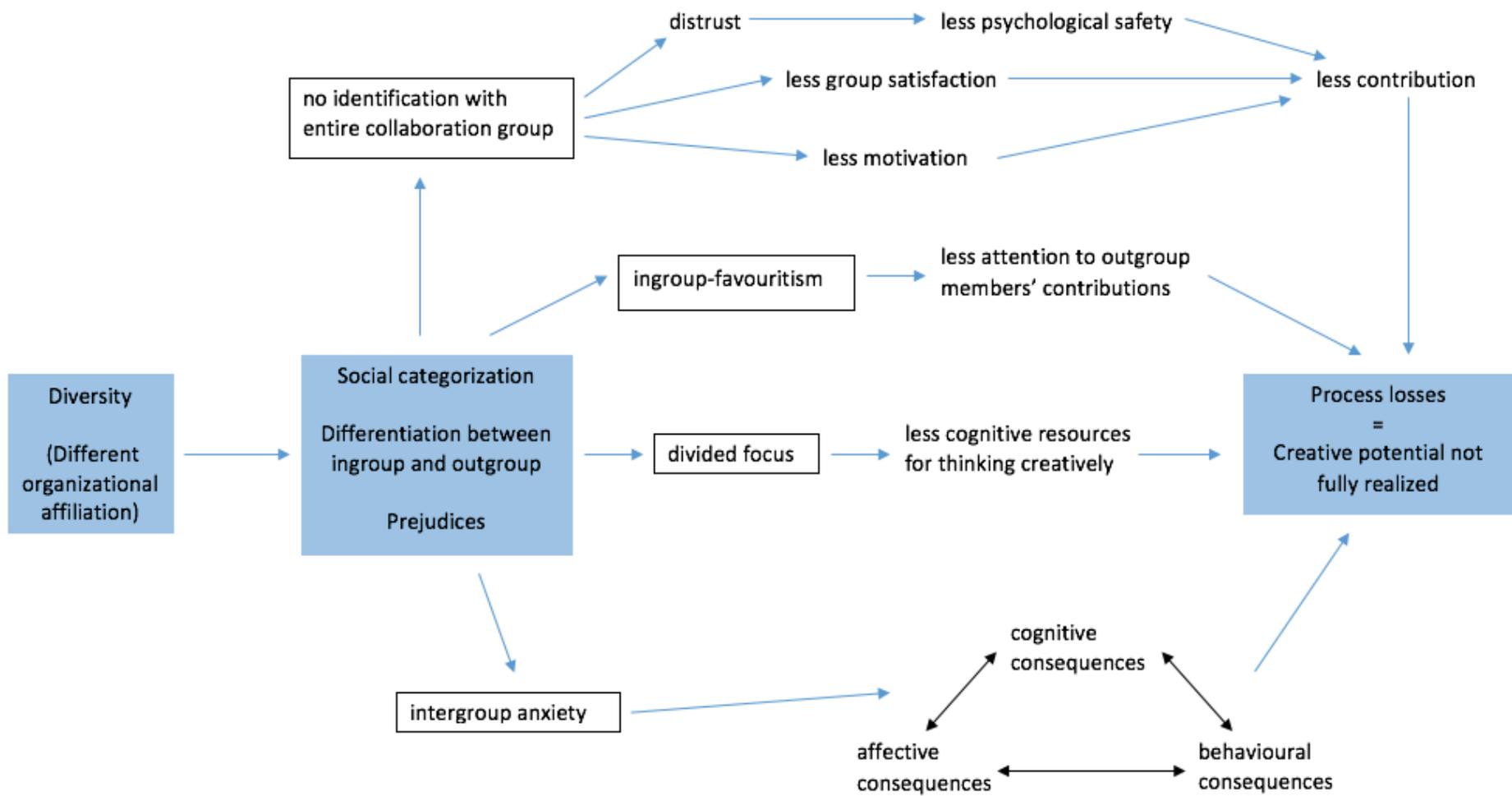


Figure 7.3.: The negative effect of organizational diversity and the related prejudices on group creativity. Own figure.

## 7.4. The Contrary Nature of Creativity and Prejudice

The previous subchapter clearly illustrated that stereotypes and prejudice negatively influence group creativity and therefore idea generation. It was shown that different organizational affiliations and the differentiation between ingroup and outgroup cause cognitive, affective, and behavioural reactions that lead to process losses, which means that existing creative potential of the collaboration group cannot be fully exploited.

However, one should be aware of the fact that reduced creative performance with regard to prejudice not exclusively originates from diversity and the subsequent categorization process, since creative performance also depends on a person's characteristics, attitudes and values. While some personal attributes are associated with a greater likelihood of thinking and behaving creatively, other attributes are said to have the opposite effect (Feist 2010; Runco 2010). This section serves the purpose of presenting certain aspects with respect to the traits and states of mind that characterize both creative and prejudiced individuals, which will illustrate the contrary nature of creativity and prejudice, and once again will highlight their incompatibility.

Openness is considered to be one of the most important factors that influence a person's creative performance. It describes an attitude that values variety and novelty which is why individuals characterized by openness are motivated to experience something new. It is also said that open individuals have a greater imagination compared to those where the trait is less pronounced. Openness is accompanied by curiosity and a positive attitude towards change. Thus, it can be summarized that one's creative performance is highly dependent on one's openness to experience which is tantamount to the broader expression of cognitive flexibility (e.g., McCrae and Costa 2008; Grosul and Feist 2014; Karakelle 2009; Feist 2010). This flexibility is non-existent when it comes to the activation and application of stereotypes. Automatic stereotype activation originates from the retrieval of before learned links between a category and stereotypes associated with that category (Cozzarelli, Tagler and Wilkinson 2002) and it is exactly this usage of recently activated knowledge that impedes flexible and creative thinking (Marsh, Ward and Landai 1999; Ward and Vaid 1997; Ward 2007). Especially prejudiced people develop a very strong category-stereotype-link and are more likely to use stereotypes, meaning that they rely on their before developed beliefs, rather than developing new ones (Kawakami, Dion and Dovidio 1998). Furthermore, the application of stereotypes results in structured and selective information management, meaning that people only notice such information that confirms their already existing beliefs, so they follow a predefined path rather than experiencing something new by leaving this path. The filtering and selection of information which is typical for people activating and applying stereotypes is untypical for people that are said to be creative. The latter are rather described by processing even information that might seem irrelevant for others (Feist 2010). But it is exactly this exploitation of available information and the accompanied cognitive stimulation that leads to creativity, since it enables divergent thinking and the infinite generation of ideas for the task at hand (Sternberg and Kaufman 2010; Austin 1978). By producing a great multitude of ideas, creative people have more options available for solving the task at hand. They carefully think about all the generated ideas before choosing the final one. People characterized by such an approach score high on the trait of need for cognition. Applying stereotypes, on the other side, relies on simple ways of thinking by evaluating situations and people based on general and simple rules. They are easily satisfied with their produced outcome and dislike infinite search for additional

solutions (Crawford and Skowronski 1998; Florack, Scarabis and Bless 2001; Runco 2010). In addition, people that use stereotypes interpret situations, especially ambiguous ones, in a manner that supports their stereotypical images. This clearly shows that stereotypical thinking is the application of learned thinking patterns and anything else than flexible. The contrary is true for openness and, thus, creative thinking because it refers to breaking these patterns and being open towards new discoveries.

A further characteristic that is related to cognitive flexibility is tolerance for ambiguity and complexity. It is said that creative people are able to accept ambiguities, paradoxes, and insecurities. They are furthermore motivated to take reasonable risks (e.g., Karakelle 2009; Puccio and Cabra 2010; Richards 2010; Sternberg and Lubart 1995; Feist 1998). Categorization and the activation and application of stereotypes, on the other side, are cognitive mechanisms that simplify information to reduce complexity. As it is known from subchapter 5.1., stereotype activation and therefore also prejudice can arise from comprehension goals which refer to the need to better understand both events and people for the purpose of predicting future occurrences and circumventing insecurities (Kunda 1999). Additionally, different cognitive styles influence stereotype application and prejudice, such as the need for closure. People high in this need search for simple and definite solutions in order to avoid uncertainty and ambiguity. These solutions are provided by common stereotypes that can easily be applied. Both people high on need for closure and prejudiced people are more likely to use stereotypes (Hugenberg and Bodenhausen 2004; Dijksterhuis, et al. 1996; Neuberg and Newsome 1993). In addition, Djikic, Oatley, Moldoveanu (2013) stated that the need for closure is characterized by disliking ambiguity and lack of structure. They elaborate that this cognitive style leads to a certain manner of processing information that is incompatible and undesired for a creative performance. Hence, stereotypic beliefs and prejudiced attitudes are associated with a closed mind and serve, inter alia, the purpose of simplifying detailed information to reduce complexity and ambiguity. Creative individuals, on the other side, accept insecurities and tolerate ambiguity and complexity, which implies that in order to produce a creative performance, one needs to eliminate stereotypical thinking.

Another differentiation that can be made between a prejudiced and a creative state of mind refers to conformity. Creative people do not simply accept what is given, but they “doubt, question, and often reject norms, traditions, and conservative ideology” (Feist 2010, p. 122). This is also supported by Runco (2010) who stated that “creativity requires original and unconventional thinking” (p. 416). Conformity, conscientiousness, and conservatism are considered to negatively impact one’s creative performance (e.g., Feist 1998; Feist and Brandy 2004; Nettle 2006; Peterson and Pang 2006; Rubinstein 2003). Highly creative people are characterized by independence and confidence, and they are said to be less extrovert and sociable (Feist 1999). It is interesting to compare these attitudes with the before presented social adjustment motives that can cause stereotype activation and prejudice (see section 5.1.2.). Social adjustment describes people’s need to adapt their behaviour to the given context, meaning that they follow existing rules and norms in order to socially fit into the surrounding environment (Lowery, et al. 2001). They want to be socially accepted and therefore present themselves in a way that achieves this goal. This behaviour which can be attributed to people that hold stereotypes and prejudice is tantamount to what Christian Byrge and Søren Hansen (2014) referred to as wearing social masks. Instead of being independent and self-confident, people express themselves and behave in accordance to social expectations, which hampers creative thinking. Generally, it can be said that personal motives, needs, and goals highly influence people’s attitudes and behaviours since their appropriateness determines whether or not desired aims will be reached. By focusing too

much on the future, people are not able to exclusively engage in the task, which inhibits task focus and creative presence. Both are necessary conditions to open one's mind and widen one's awareness to, finally, reach a state of mind that allows free thoughts and creativity (Byrge and Hansen 2014; Richards 2010). Therefore, people with prejudice arising from personal goals, such as social adjustment, and people that cannot take off their social mask, lack the important characteristics that are assigned to highly creative people.

The contrary nature of creative and stereotypical thinking is also confirmed by several studies. Kay Sassenberg and Gordon Moskowitz (2005), for example, came to the conclusion that thinking creatively can prevent the activation of stereotypes. Their research was based on the assumption that creative thinking is accompanied by unconventional and novel approaches that are distinct from usually applied patterns of thinking, such as stereotypes. Sassenberg and Moskowitz compared two groups with different mindsets. While they activated a creative mindset in one experimental group by asking them to think about situations in which they behaved creatively, they activated a thoughtful mindset in the other group by asking them to think about situations in which they behaved thoughtfully. Results clearly indicated that people in the creative condition were less likely to activate stereotypes when they have been shown pictures of African Americans compared to those in the thoughtful condition. The researchers concluded that automatic stereotype activation can be proactively prevented by activating a creative mindset.

Further studies were conducted by Carmit Tadmor, Melody Chao, Ying-yi Hong, and Jeffrey Polzer (2013). They wanted to find out if holding prejudiced beliefs influence creative performance. For this purpose, two experimental groups were asked to read a fictitious scientific article. While one concluded that one's abilities and traits are to a large extent biologically determined by that person's race, the other did not find a relation between a person's race and his or her abilities and traits. After, participants of both groups had to take a creativity test. The results clearly showed that participants who read the first article (ability is biologically determined by one's race) scored lower in the test compared to those reading the second. This indicated that prejudiced beliefs can hamper creativity. They complemented this study by measuring the participants' closed-mindedness. As expected, people given the first scientific paper scored higher on closed-mindedness than did people who read the second one. Based on the assumption that the high score originated from holding prejudiced beliefs, the researchers viewed closed-mindedness as a mediator between prejudice and creativity. Gocłowska, Crisp and Labuschagne (2013) presented a paper in which they suggest that thinking about counter-stereotypes can enhance people's creative performance by generally making them think in a more flexible manner. Counter-stereotypes is the expression for a combination of characteristics and social categories which generally are not associated with each other, such as, gay soldiers, male preschool teachers, female engineers. The authors proposition is based on the assumption that people whose stereotypic beliefs are disconfirmed do not longer rely on the previously learned and activated knowledge since its application does not seem to be useful to react appropriately to the situation. Therefore, people's processing of information becomes more flexible by relying less on habitually used and easily accessible knowledge (Mednick 1962; Nijstad, et al. 2010; Schank and Abelson 1977). Indeed, the results of the study supported the researchers proposition and made them conclude that people's creative performance can be enhanced by making them think about counter-stereotypes. This is due to the fact that counter-stereotypes alter people's habitual information processing; while on the one hand old thinking patterns that relied on immediately accessible knowledge are released, on the other hand, novel and flexible ways of

thinking that boost creativity are established. This results are further supported by previously carried out studies (e.g., Blair, et al. 2001; Dasgupta and Asgari 2004; Dasgupta and Greenwald 2001). Thus, the presented researches confirm the opposed characteristics of prejudiced and creative state of minds. An overview about the most salient differences based on the information provided in this entire subchapter can be found in *Table 7.4.* below.

<b>Creativity</b>	<b>Prejudice</b>
- cognitive flexibility	- usage of recently activated knowledge
- openness	- closed mind
- curiosity	- application of learned thinking patterns
- breaking old thinking patterns	- structured and selective information management
- high need for cognition	- low need for cognition
- tolerance for ambiguity and complexity	- endeavour to reduce ambiguity and complexity
- low need for closure	- high need for closure
- unconventional thinking	- social adjustment motives
- independence and confidence	- behaving in accordance to social expectations
- one focus	- divided focus

*Table 7.4.:* The contrary nature of creativity and prejudice.  
Own table.

However, even though there appears to be a clear distinction between stereotypic and creative thinking, one still needs to be aware of the inconsistencies that exist. G. J. Feist (1998), for example, who performed a meta-analytical review of literature with regard to the connections between personality and creative behaviour stated that there is a positive correlation between people’s level of anxiety and their level of creativity. Considering section 6.4. which explained the close link between intergroup anxiety and prejudice, followed by an elaboration on the negative consequences that this anxiety has for group ideation processes and creativity (see section 7.3.), it becomes difficult to find an explanation why an emotional state that leads to prejudice, at the same time can boost creative performance. Nevertheless, it should be pointed out that Feist’s statement referred to creative artists, which is followed by two implications. Firstly, anxiety might be a prerequisite for artistic creativity but not for other kinds of creativity, and secondly, it is likely that most artists are working individually, wherefore anxiety might have a different impact on individual and isolated performances compared to situations in which creativity should emerge through the interaction with other individuals. These implications indicate that one needs to consider both what sort of creativity is asked for and whether the creative performance is provided by a single individual or by a group in order to determine the necessary preconditions for achieving a high level of creativity. Furthermore, it should be pointed out that probably not every approach to reduce stereotypical and prejudiced thinking automatically results in increased creativity. As it is known from section 5.2.1., individuals that are internally motivated to control prejudice are less likely to express biased interpretations towards stereotyped individuals, even though they are well aware of existing beliefs about the social groups these individuals belong to (Kite and

Whitley 2016). Thereby, their intrinsic motivation to control prejudiced responses is likely to be followed by consciously concentrating on their behaviour in order to establish and maintain the personal desired image that make one look unprejudiced. This, in turn, leads to a situation in which it is impossible to purely focus on the task at hand. Consequently, thinking creatively is inhibited because task focus belongs to the indispensable prerequisites for fully making use of one's creative potential (Byrge and Hansen 2014). Therefore, even though awareness of prejudice and intrinsic motivation to control them generally results in less application of stereotypes, it is questionable to what extent this conscious mind control will be beneficial for one's creative performance. It is for this reason that it is assumed that unconscious manipulation of a person's mindset will achieve greater positive effects on a person's creativity compared to methods that require a person's conscious control.

## 8. Methods for Reducing Prejudice and Enhancing Group Creativity

After the elucidation of the negative consequences of prejudice on interorganizational ideation processes, one should be provided with the necessary knowledge and tools to proactively prevent these process losses in order to fully exploit the creative potential of the collaboration group. Since this thesis focuses on inhibited creativity induced by holding prejudice towards outgroup members (i.e., individuals not belonging to one's own organization), the methods presented in this section serve the purpose of circumventing the negative effects of differentiating between one's own and other organizations, while at the same time providing general guidance on strategies that reduce the activation and application of stereotypes. In the course of this chapter, it becomes apparent that the usefulness of different supportive actions to overcome process losses vary dependent on the respective temporal context of the collaborative project. That is to say, while some recommended measures should be given greater consideration long before the actual interorganizational collaboration, others are especially important right before the first intergroup interactions, and still others need to be taken into account throughout the entire ideation process.

The chapter is divided into four sections. The first one includes general theories about and models for intergroup contact processes, the second section emphasises key success factors for reducing intergroup prejudice and fully exploiting the existing creative potential of interorganizational groups, the third section explores the benefits of regular training for the purpose of generally becoming less prejudiced and more creative, and the fourth section provides a checklist with an overview about the most important issues for interorganizational collaboration projects based on the three before presented subchapters.

### 8.1. Intergroup Contact Processes

#### *8.1.1. Intergroup Contact Theory*

The intergroup contact theory, or contact hypothesis, implies that mere contact between ingroup and outgroup members will improve their relationship. It is based on the assumption that contact automatically leads to cross-group interaction and communication, which supposedly results in mutual understanding and respect (Amir 1976; Kite and Whitley 2016). This theory, however, should be treated with great caution because it oversimplifies the contact process and precludes any negative consequences resulting from mere contact. Recall from section 6.3. about the realistic conflict theory that results from the Robbers Cave experiment clearly showed that intergroup contact per se is not sufficient to improve the perceptions of outgroup members. In fact, contact situations between members belonging to different social groups can even have the opposite effect, and result in stronger negative beliefs about the outgroup. This is especially likely to occur when the cross-group interaction is perceived as negative (Barlow, et al. 2012; Binder, et al. 2009). Nevertheless, intergroup contact can lead to decreased intergroup anxiety and less prejudiced attitudes towards the outgroup if certain conditions are met. The four most important ones have already been presented by Gordon Allport (1954), these are: (1) equal status, (2) cooperation towards a common goal, (3) acquaintance potential, and (4) institutional support.

In order to create a positive experience in relation to intergroup contact, members from all groups should possess the same rights and an equal status. It should be pointed out that no group is more important or worth more than others. The participants' perception of similarity encourages them to communicate on an equal footing, which results in reduced stereotypes and even positive attitudes towards outgroup members.

The second condition for successful intergroup contact includes cooperative action to ensure the achievement of a common goal. If the contact is accompanied by a task that can only be solved through intergroup cooperation and the participants are highly motivated to tackle this task due to the fact they simply strive for its solution, it is very likely that the cooperative situation causes reduced outgroup prejudice originating from the participants' perception of a common group identity. This development was also confirmed by results from the Robbers Cave experiment (Sherif 2010). Both common goals and cooperation are taken up again later in this chapter in section 8.2.2. about the key success factors for interorganizational collaboration. Hereinafter they will be referred to as superordinate goals and task interdependence.

The third necessary condition for a positive intergroup contact situation is the acquaintance potential which is concerned with the project participants' opportunities to get to know each other. As previously mentioned, when people start to focus on individuating information rather than on the information that results from a person's group membership, people think less in stereotypical terms and perceive the person as an individual. This, in turn, makes people aware about the fact, that they have a lot in common with the individual, which makes them generally less anxious about intergroup contact. Furthermore, the awareness about relevant commonalities positively influences one's ability to empathise with members belonging to other groups (Davies, et al. 2011). In order to achieve these positive results, interactions between members from the different groups must occur. In some cases, regular intergroup communication can even result in friendship, which, for one thing, improves trust across group boundaries and secondly, enhances the common sense of responsibility for the task at hand (Davies, et al. 2013). This relationship of mutual trust is accompanied by a positive intergroup climate and the perception of psychological safety, which makes it easier for the participants of the interorganizational collaboration to contribute to the idea generation process by sharing their thoughts and ideas (Gu, et al. 2016). This knowledge exchange is exactly what is needed to boost creativity and is therefore highly desired by the project leaders. The final necessary condition to improve intergroup attitudes through intergroup contact listed by Allport (1954) is institutional support. This means that it should be clearly communicated through superiors, laws, and social norms that intergroup contact is desired. Moreover, group members need to understand what is expected from them in order to behave accordingly. In addition, authorities should provide assistance before, during, and after the collaboration project, in order to develop a positive attitude towards changes and help the participants to appropriately handle upcoming problems. It will be further elaborated on the topic of institutional support in section 8.3.1., in section 8.2.5. about the presence of behavioural rules, and in section 8.2.6. about facilitation. Furthermore, the entire subchapter 8.3. is dedicated to providing an overview about the different regular measures that can be taken by organizations to reduce prejudiced attitudes and enhance creative thinking. Allport's four essential factors facilitating the success of intergroup contact were supplemented by additional ones that are said to increase the likelihood of a positive intergroup contact experience. They can be found in the chapter 'Intergroup relations' written by Walter Stephan (1985) in the Handbook of social psychology.

A review of a large number of intergroup contact studies concluded that mere cross-group interaction situations reduce prejudiced attitudes towards the outgroup and that this effect is even stronger when Allport's four conditions are met (Pettigrew and Tropp 2011) (Pettigrew und Tropp 2011). Hence, even though the four factors seem to be important, they should not be considered to be a prerequisite for successful intergroup contact, which supports the initial presented contact hypothesis. Indeed, regardless of the four conditions,

Pettigrew and Tropp's meta-analysis concluded that contact across one's ingroup boundaries results in increased knowledge about the outgroup, and thus in more positive attitudes towards outgroup members. Besides increased knowledge, intergroup interactions also make the project participants show greater empathy with outgroup members, which leads to decreased intergroup anxiety (Stephan 2014). Pettigrew and Tropp (2011) also found that the impact of empathy on prejudiced attitudes is even greater than the impact of knowledge. The positive effect of intergroup contact was also confirmed by other studies. According to these, cross-group interaction situations are accompanied by cognitive changes that positively contribute to one's creative performance by, inter alia, resulting in a higher level of openness (Tadmor, et al. 2012). Furthermore, intergroup contact leads to reduced stereotyping (Aberson and Haag 2007), it positively influences one's general expectations towards intergroup contact situations (Plant and Devine 2003), and it reduces one's anxiety towards the interaction with outgroup members by demonstrating that intergroup contact does not pose any danger to oneself (Tausch, et al. 2007). A further phenomenon that arises through intergroup contact is that people break their habits through being confronted with new situations. This, in turn, can enable them to think more flexible, and in the best case even lead to attitude changes that are advantageous for creativity, and consequently have a negative effect on the activation and application of stereotypes (Kite and Whitley 2016).

It can be summarized that mere intergroup contact is likely to result in reduced prejudice, since the contact situation results in increased knowledge about and empathy with outgroup members, which is followed by reduced intergroup anxiety. Nevertheless, contact per se can also have the opposite effect, leading to more negative attitudes towards the outgroup. In order to avoid this, the likelihood of a positive cross-group contact situation can be increased by considering four factors, including an equal status of all participants regardless of their group membership, intergroup cooperation towards a common goal, acquaintance potential, and institutional support.

### *8.1.2. Three-Stage Model for Intergroup Contact Situations*

Building upon the intergroup contact theory, Thomas Pettigrew (1998) combined three models to explain the entire process towards reduced prejudice through intergroup contact. All three models are based on the social identity theory which was presented in section 6.1. Originally, the models were developed independent from each other and seen as contradictory, since they describe different, supposedly irreconcilable perspectives on the process of intergroup contact. However, Pettigrew recognized their complementary relationship and explained that the models represent different phases throughout the contact situation (Kite and Whitley 2016). Thus, they are successive rather than parallel. The three-stage model includes, firstly, the personalization stage which is concerned with the search for individuating information about an outgroup member, secondly, the generalization stage which refers to the transfer of positive attitudes towards an individual to his or her entire group, and thirdly, the common identity stage whereby positive intergroup relationships lead to the development of a common social identity.

The first stage is based on the personalization model developed by Marilyn Brewer and Norman Miller (1984). Interpersonal interactions allow for individuating and more complex information, which is why one starts to recognize outgroup members as individuals whose identity goes beyond the group membership. Through interpersonal information exchange, one becomes aware about the existing similarities between oneself and a member from the outgroup, which is likely to reduce intergroup anxiety (Stephan 2014) and to result

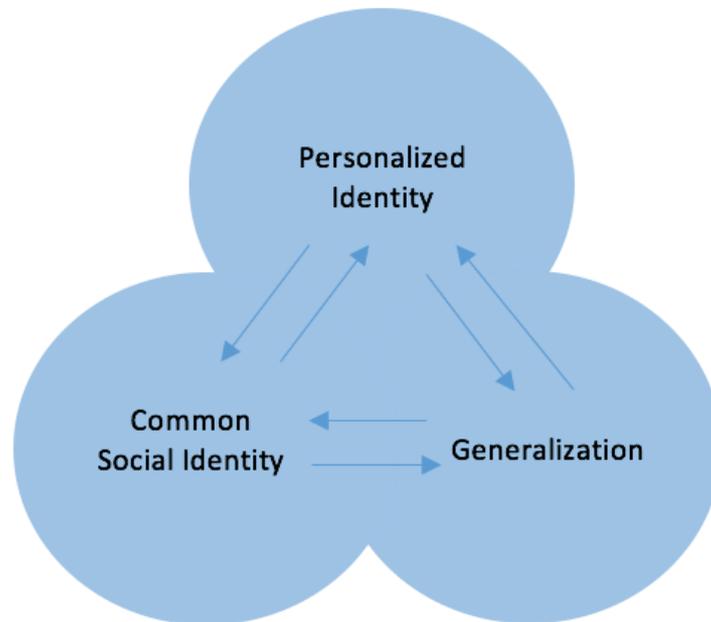
in a disconfirmation of the before existing stereotypic beliefs. Therefore, applying stereotypes seems inappropriate and without value which is why one is motivated to de-categorize the outgroup member and view him or her in more complex terms, which finally provides the former outgroup member with a new and personalized identity. Consequently, interpersonal interactions within creative collaborations should be encouraged, since they result in a better intergroup climate through higher levels of empathy and trust, which in turn leads to more openness and a higher motivation to contribute to the process by sharing ideas and opinions (Jarvenpaa and Leidner 1999). Brewer and Miller (1984) suggested that de-categorization could be provoked by deliberately creating new perspectives on the cooperative task to solve, by changing roles and responsibilities within the working group, and by tasks that promote searching for individuating information, and thus personalization of the participants.

The second stage refers to a model by Miles Hewstone and Rupert Brown (1986) and includes the idea that personalized contact promotes generalized attitudinal changes. This means that the individuation process and the positive, or at least less negative, image of a specific outgroup member is transferred and generalized to the entire outgroup. This generalization process requires salience of group membership during intergroup contact, which means that, in order to allow for the transfer of certain attitudes from an individual to an entire group, this individual must be perceived as typical within its group. This approach is quite contrary to the one demanded in the first stage, where group characteristics need to be less salient in order to recognize an outgroup member as an individual with a complex identity. Hence, due to these opposed approaches it becomes clear that the two presented stages are less likely to take place at the same time, but rather are gone through in sequence. In addition, it should be pointed out that the generalization process does not have to be positive. If the interpersonal interaction between individuals of two different groups results in a negative perception of the other group member, the transfer of these beliefs from the individual to the entire group will result in increased intergroup anxiety and an even more prejudiced attitude towards the outgroup as a whole (Barlow, et al. 2012; Binder, et al. 2009).

Finally, the third stage is concerned with the development of a common social identity, which was initially presented by Samuel Gaertner and his colleagues (1993; Gaertner, et al. 2016). Due to the before mentioned phases, the outgroup is not anymore perceived as such. Recognizing people's complex identities in combination with the existing similarities to oneself results in a re-categorization process. Thereby, all participants in the contact situation, including oneself, are categorized into a new group. This means that the previously separate groups become one ingroup and possess a common social identity. Thus, negative stereotypes are replaced by positive ones, since one usually tries to create a positive image of the group one identifies with. In order to achieve this common identity, it is necessary that the intergroup contact is perceived as positive (Kite and Whitley 2016). Moreover, some researchers mention the high relevance of regular meetings in order to build personal relationships, feel safe, and develop mutual trust (Gu, et al. 2016), which finally leads to a sense of shared identity for the interorganizational collaboration group (Andersen, Kragh and Lettl 2013).

Despite the sometimes contradictory cognitive processes throughout the three stages, Pettigrew (1998) suggested that they still can overlap in practice. Furthermore, the progress of the three phases can vary from person to person. While one might develop a sense of a common social identity quite fast, another might not even be able to perceive outgroup members as individuals. Brewer and Gaertner (2001) further proposed a more dynamic and iterative model in which the three stages do not have to occur in the presented order, neither do they have to occur only once. This is based on the complexity and diversity of

contact situations that one might experience. While some require group-to-group interactions, others might emphasize person-to-person interactions. Situational factors might change throughout the contact situation, which can impact the pace and order of the three stages. An illustration of the three-stage model for intergroup contact situations can be found below in *Figure 8.1.2.*



*Figure 8.1.2.:* Three-stage model for intergroup contact situations. Own figure.

### *8.1.3. Indirect Contact*

Besides personal face-to-face contact, it is also suggested that indirect contact can result in more positive attitudes towards outgroup members. Nevertheless, it should be pointed out from the beginning of this subchapter that experiences made through direct contact situations have a stronger and longer-lasting effect on prejudiced attitudes compared to indirect contact situations (Vezzali, et al. 2014). Both extended contact and imagined contact seem to be relevant with regard to reducing prejudice in interorganizational collaborations, which is why both forms of indirect contact are elaborated on.

The extended contact effect refers to a situation in which prejudice is reduced by having an ingroup friend that has one or several outgroup friends. The most important and positive consequence that results from the extended contact effect is the decreased intergroup anxiety (Wright, et al. 1997), which automatically prevents several negative cognitive, affective, and behavioural reactions towards intergroup interaction situations that were presented in section 6.4., such as being afraid to break social norms by having contact to outgroup members, or anxiety towards being rejected or even embarrassed when trying to interact with outgroup members. Additionally, a condition in which one is disliking a person which is liked by one's friend results in cognitive dissonance. This term describes a state in which one's environment behaves in a manner that does not align with one's beliefs and attitudes. In order to overcome cognitive dissonance one has to change these beliefs and attitudes so that they match again with the people's actions around one (Kite and Whitley

2016). This is exactly what happens when one becomes aware of an ingroup friend having an outgroup friend. The negative attitude towards the outgroup members creates cognitive dissonance, which is reduced again by changing one's beliefs and attitudes towards this person, or even the entire outgroup. Since the intergroup friendships shows that cross-group contact does not pose a threat to oneself and the ingroup, extended contact can be used as a preparation method to support people before their first personal intergroup contact. Creating awareness about already existing and positive intergroup relationships result in positive expectations towards the intergroup contact, and demonstrate that these contacts are socially accepted (Vezzali, et al. 2014). Thus, extended contact reduces or even eliminates intergroup anxiety and has, therefore, positively impacts interorganizational creativity.

The second form of indirect contact is imagined contact. Richard Crisp and Rhiannon Turner (2012) suggested that prejudice can be reduced by simply imagining a positive contact situation before the actual intergroup encounter. By mentally preparing for the first interaction with an outgroup member, one is shaping one's expectations, emotions and future behaviours regarding the upcoming situation. Due to the fact that various research results confirm the positive effect of mental imagery and rehearsal on one's future behaviour, Crisp and Turner (2012) propose that mental preparation for the first intergroup encounter can result in reduced intergroup anxiety through increasing one's confidence, and being more relaxed and less worried about the future interaction. As it is known from section 6.4., intergroup anxiety can be accompanied by a high level of arousal. It is shown that this physiological process can also be avoided by mentally rehearsing the intergroup contact (West, Turner and Levita 2015). All this indicates that, just like extended contact, imagined contact can be used as a method to develop positive attitudes towards cross-group contact situations (Kite and Whitley 2016), and to prepare project participants for their first interaction with members from other organizations.

## 8.2. Key Success Factors

Based on both scientific and practical research, this subchapter aims at giving an overview about the most important factors that should be considered when planning for an interorganizational collaboration which partly calls for group creativity. Most of these serve the purpose of creating a group climate that eliminates any kind of anxiety and that allows for the feeling of psychological safety and open communication. The experience of a safe environment enables the collaboration participants to have access to all their knowledge and, furthermore, motivates them to share it with their fellow group mates. The influence factors are, the group composition, the provision of a superordinate goal and the creation of task interdependence, mindset manipulation before the first intergroup encounter, cognitive busyness, the presence of behavioural rules, the role of the process facilitator, and shared leadership. These seven key success factors will be elaborated on in detail below.

### 8.2.1. Group Composition

Recall from section 7.2. that a group's realized creativity is dependent on the group's creative potential minus process losses. Therefore, when composing the group for an interorganizational collaboration project, persons in charge of this composition should carefully identify and select those individuals that both fit the project's objective (Andersen, Kragh and Lettl 2013) and might increase the group's potential. Furthermore, the group members should be selected in a manner that they can complement each other with their

abilities, knowledge, and skills. The overall aim for the composition should be to create a group that is able to work synergistically. This means that the participants should neither have strongly opposing views and beliefs, nor should they agree upon everything. In short, both too diverse and too similar group inhibit synergistic effects between the participants, result in process losses and, thus, in reduced group creativity (Rasmussen 2003).

The persons responsible for the group composition should be well aware about the participants' backgrounds and individual characteristics. Finally, the group performance is also highly dependent on the creative potential of the individual collaboration participants (Hoegl and Parboteeah 2007; Liao, Liu and Loi 2010). Their individual creativity and the contributions they will make to the task progress can be estimated based on different determining factors. Even though it seems logical that the more creative the participating individuals are, the more creative is the group as a whole, and consequently the better their performance in relation to a creative task, Rasmussen (2003) emphasised the importance of synergy within creative groups and suggested that synergistic effects can best be reached, when the group not exclusively is composed of creatively oriented participants, but also of analytically oriented ones. Nevertheless, this section focuses on possibilities to determine an individual's creative potential within a group.

Rasmussen (2003) also proposed that the group is not able to work synergistically if it includes participants that are strongly egocentric. This is due to the fact that self-centred persons are likely to focus on their own ideas and opinions instead of using others' as stimulators and elaborating on these. Thus, the desired attention to other group members' contributions does barely occur, which results in process losses.

As it became clear throughout the previous presented chapters, whether one can generally be described as being high-prejudiced or low-prejudiced has major consequences for all the processes that lead to prejudice, and therefore is an important characteristic that is worth knowing before the collaboration starts. For example, in subchapter 5.1. it was explained that people higher in prejudice are more likely to activate stereotypes compared to people lower in prejudice. Since stereotype activation is a prerequisite for its application, it can be concluded that people scoring high in prejudice are also more likely to apply stereotypes and act in a prejudiced manner than are people scoring low in prejudice. Moreover, people high in prejudice are said to require more contact with members from outgroups before realizing any advantageous change in their attitudes and beliefs towards outgroup members in comparison to people low in prejudice (Kite and Whitley 2016). Consequently, it appears that time plays a key role with regard to attitudinal change for prejudiced people. Considering that time in organizational projects belongs to the finite resources, and that groups habitually need to form and perform in parallel (see section 7.2.), the time needed for developing positive attitudes towards the outgroup should be as short as possible. Therefore, a reduction of process losses can be reached by assigning low-prejudiced people to the collaboration project. There are different ways to assess stereotypes and prejudice. The most commonly used include self-reports, observation of behaviour, assessment of physiological responses, and implicit cognition measures. To not exceed the scope of this chapter, it is recommended to read page 49 to page 62 in the second chapter of Kite and Whitley's (2016) book 'Psychology of prejudice and discrimination' to get a first overview about the different measures.

A further factor that should be considered before assigning an individual to a creative group is this person's general attitude towards interorganizational collaboration and the project's objective itself. Korb, Geißler and Strauß (2015) highlight that all participants need to be interested in the collaboration in order to generate a common view and a shared

understanding of the task at hand, which is facilitating cooperation. Additionally, group members will only contribute to progress if they are motivated to do so. Recall from subchapter 7.3. that one's intrinsic motivation determines the extent to which one uses his or her existing creative potential. Therefore, collaboration participants should have a positive attitude towards the project and be motivated to solve the task in a group, since this will reduce process losses. An important influence factor for a person's attitude and motivation is prior experience. which is why project managers should be aware of whether a collaboration participant has been part of an interorganizational project before; and in the case of prior experience, whether or not the collaboration has been perceived as positive. A positive interorganizational experience is likely to result in positive attitudes, while a negative one leads to negative expectations towards future cross-organizational contact. It appears obvious that existing negative attitudes are not changed when the intergroup contact is not perceived as positive. But more importantly, it is also assumed that negative expectations impede attitudinal change even if the contact situation is positive (Deegan, et al. 2015). This phenomenon can be explained through biased interpretation and information selection processes that support one's initial negative expectations, as it was previously described in subchapter 7.3. Thus, the quality of a person's prior experience with regard to interorganizational collaboration projects appears to be an important factor for the person's attitude and motivation.

Camacho and Paulus (1995) also showed that anxiety towards social interactions influences the outcome when the task has to be performed in a group. Their research concluded that groups whose members are high in social anxiety performed less successful than did groups with members low in social anxiety. It is likely that these results can be transferred to intergroup anxiety, which would imply that people experiencing anxiety when interacting with outgroup members, such as people from other organizations, cause process losses. Therefore, managers could consider to either recruit people that are generally low in social and intergroup anxiety or when anxious people possess knowledge and skills that are relevant for the project recruit these and reduce their anxiety. This is could, for example, be done by extended or imagined contact which was already explained in section 8.1.3. Intergroup anxiety results from categorizing oneself and others into social groups and by strictly maintaining these groups. This indicates that people who find it easier to de-categorize themselves and others are less likely to experience intergroup anxiety. Therefore, it can be assumed that the higher the number of social groups one assigns oneself to, the less anxiety towards outgroup members one experiences, since people who possess several social identities find it easier to identify with others and, therefore, are also more likely to quickly re-categorize oneself and others (cf. Gaertner and Dovidio 2005). Hence, selecting individuals with an exceptionally high number of social identities and/or preparing individuals through indirect contact for interorganizational collaborations should result in decreased anxiety, reduced process losses, and thus in increase the chances to fully exploit the group's creative potential.

Finally, when choosing the participants for the collaboration project, one should bear in mind that members of the work group highly influence each other through their regular interactions, which means that their attitudes and behaviours are mutually interdependent (cf. section 7.2.). Consequently, the choice of a person possessing less favourable attitudes and characteristics for intergroup creativity might have major negative consequences for the group's process and its performance.

### *8.2.2. Superordinate Goal and Task Interdependence*

The positive effect of superordinate goals and task interdependence on reducing intergroup tension becomes especially apparent through the Robbers Cave experiment presented in section 6.3. There, the researchers created a situation in which the former competing groups with a hostile attitude towards each other perceived common deprivation. Members of both groups became aware that they could only overcome this deprivation if they cooperated. This situation of functional interdependence was consciously created by the experimenters. The results of the research indicated that working cooperatively towards a common goal can reduce a state of friction between hostile groups, and improves the participants' attitudes towards the outgroup. Furthermore, every additional intergroup task that was characterized by a common goal and functional interdependence resulted in even more positive associations with outgroup members and generally more positive attitudes towards them, which points out the cumulative effect of superordinate goals. The improved intergroup relationship removes negative stereotypic beliefs about outgroup members and brings the two groups together. This, in turn, simplifies communication and interaction between members belonging to different groups and, furthermore, reduces ingroup-favouritism (Sherif 2010).

Also other research highlights the importance of a common goal in interorganizational projects. Moreover, authors put emphasis on introducing the superordinate goal right at the beginning of the project in order to ensure a shared understanding of the project's objective, and thus provide the work group members with the ability to adjust their actions towards this joint objective. To avoid ambiguous interpretations of the superordinate goal, open communication within the collaboration group should be encouraged (Korb, Geißler and Strauß 2015). The common understanding of the shared goal and how this should be achieved also enhances one's motivation to contribute to the progress of the task (Marrone, Tesluk and Carson 2007), which is accompanied by increased knowledge sharing. The latter is further provoked by the group having a common focus, which enables an even stronger focus on the task at hand and results in increased creative behaviour (Byrge and Hansen 2014).

An important factor for the final performance are the task characteristics, because they highly influence the group's input and its process (Stewart and Barrick 2000). With regard to this, the before mentioned task interdependence appears to be of particular importance for group creativity. As the expression indicates, it refers to the necessity to communicate and cooperate with one's fellow group mates in order to successfully achieve the task. Hence, the group members highly depend on each other (Staples and Webster 2008; Cummings 1978). It is suggested that task interdependence encourages the members' feeling of a coherent group by increasing the need for social interactions between them. This, in turn, results in a higher motivation within the work group (e.g., Kelly 1979; Sheppard and Sherman 1998)). Through impeding negative social processes, task interdependence positively impacts open sharing of knowledge and the participants' attitudes towards intergroup collaboration (Leung and Wang 2015). It is even said that it moderates the relationship between knowledge sharing and team creativity (Gu, et al. 2016). However, Jehn (1995) took a contrary position and assumed that increased member interactions could also result in increased interpersonal conflict. This is due to the fact that task interdependence only achieves the desired positive effect, if group members are willing to invest sufficient effort in the communication it requires (Leung and Wang 2015). Hence, the success of task interdependence is highly dependent on each individuals' willingness and motivation to contribute to progress. Both can be achieved by making the task's solution sufficiently appealing to the collaboration participants.

In sum, providing the interorganizational collaboration group with an unambiguous common understanding of a superordinate goal that is communicated at the beginning of the project, has value for the participants, and whose achievement requires the group to work cooperatively (i.e., task interdependence), positively influences the participants' attitudes towards members belonging to other organizations, and thus reduces process losses which always means a higher degree of exploitation with regard to the group's creative potential.

### *8.2.3. Unconscious Mindset Manipulation*

The presented studies in section 7.4. clearly showed that making people think creatively in an unconscious manner inhibits stereotypical thinking and enhances flexible and creative thinking, which is both desired for group ideation processes. Thus, due to the previously explained contrary nature of prejudice and creativity, any method that unconsciously encourages one to activate one's creative mindset can be used to reduce prejudiced attitudes. This could for example be reached by simply making participants think of a situation in which they behaved creatively (Sassenberg and Moskowitz 2005), or by making them think about counter-stereotypic people (Gocłowska, Crisp and Labuschagne 2012). These measures are easy to use for the facilitator and do not require previous training for the participants in order to achieve the desired outcome. Consequently, unconscious mindset manipulation could be used directly before the first interorganizational encounter as well as throughout the creative part of the collaboration project when the facilitator recognises the need for more cognitive flexibility among the participants.

In more practical terms, right before the first encounter of the collaboration group, the participants could receive the task to think about a situation in which they behaved creatively. Due to the previously presented study, this should activate a mindset that is characterized by more flexibility, and consequently is likely to positively influence the first contact situation between the members of different organizations.

### *8.2.4. Cognitive Busyness*

It is known from subchapter 5.2 that stereotypes that are not activated cannot be applied. Therefore, one should make use of methods that can inhibit the activation process. One of these methods that was also presented in section 5.1.1 is cognitive busyness. Based on the fact that stereotype activation results from the retrieval of previously stored information, which means that the activation requires mental capacity, automatic stereotype activation can be impeded by creating a situation in which people focus on another task and already make use of their mental capacity, which causes that the required cognitive resources to activate stereotypical thinking are not available (Gilbert and Hixon 1991). In short, the people are cognitively busy. It is for this reason that it is suggested to permanently and right from the beginning of the project make the collaboration participants focus on other tasks in order to not allow for automatic stereotype activation, and thus impede stereotype application.

### *8.2.5. Presence of Behavioural Rules*

Guiding the participants' behaviour by establishing group norms positively impacts the general communication within the collaboration group and enhances the sharing of knowledge (Choi 2002; Korb, Geißler and Strauß 2015), which results in an improved group performance. Through the provision of behavioural rules, participants know what actions and

reactions are expected from them, which decreases their insecurity about interactions with members from other organizations, and thus reduces intergroup anxiety (cf. section 8.2.5.). Furthermore, appropriate rules can contribute to a group climate that is characterized by psychological safety. As previously mentioned, the absence of feeling psychologically safe can cause participants to be extremely reserved about contributing with their ideas and opinions to the group's progress (Milliken, Bartel and Kurtzberg 2003).

Several rules are suggested for the idea generation process in order to create a positive group climate that enhances creative performance. One of these is the before mentioned equal status (see section 8.1.1.). It should be clearly communicated that all participants are subject to the same rules and that no subgroup or participant possesses a higher degree of importance than other collaboration members.

Since one of the most popular techniques for enhancing the number of ideas is brainstorming which is also used by many organizations, following Osborn's (1957) brainstorming rules is highly recommended. The four rules include to come up with as many ideas as one can, to encourage unusual or even crazy contributions, to not criticise one another's ideas, and to further develop the generated ideas. Strictly following these rules results in task focus and enhanced creative behaviour. Knowing that one will not be criticised increases the feeling of psychological safety, and consequently makes it easier to openly share one's ideas and thoughts.

Further rules for creative behaviour are presented by Christian Byrge and Søren Hansen (2014). They argued that creativity requires task focus, which is why anything that redirects one's focus to task-unrelated issues should be removed. This includes especially the removal of watches, phones, and computers. Moreover, irrelevant people or unwanted stimuli, such as room decoration, food, and beverages can be obstacles to one's creativity. They further explained that discussions are detrimental to creativity which is why these should not be allowed in idea generation processes.

In sum, presenting behavioural rules right at the beginning of the project serves the purpose of clearly communicating expectations towards the collaboration participants to reduce intergroup anxiety. Additionally, established rules should create a group climate that is characterized by openness and psychological safety to allow for unconditional acceptance and encouragement of unusual and even crazy contributions from the participants.

However, even though these group norms result in increased knowledge sharing, the presented rules are not likely to inhibit the negative consequences of ingroup-favouritism which were previously elaborated in section 6.1. Measures for circumventing these are explained in section 8.3.3 about creativity training and the creative platform.

### *8.2.6. Facilitator*

The work group's creative performance is to a high degree dependent on the facilitator (Lee, Lee and Seo 2011; Robert 2013) who is not to be confused with the project leader. Facilitators can be said to have a neutral position in the creative process and do not contribute to the project with regard to contents, but rather guide the collaboration's participants to realize the best possible outcome (Rasmussen 2003). The facilitator's most important function is to allow the participants to fully concentrate on the task at hand and thus enable a shared group focus, which automatically leads to creative behaviour. For thinking creatively, it is crucial to take away any responsibility from the participants that they do not need to worry about anything else than their task. Therefore, the facilitator assumes full responsibility for the preparation and execution of the entire process. It is important to never overstrain the work group

members by giving them different tasks at the same time. It is the facilitator's responsibility to always divide the main task into several subtasks in order to only have one focus and avoid its division (Byrge and Hansen 2014).

Despite the clear distinction that is made in this subchapter between the project leader and the facilitator, some authors use the broad expression 'leadership' when referring to the guidance of creative collaborations. Since facilitators can be said to also lead the group process, it is assumed here that the specific leadership skills that are needed for the successful execution of a creative process should be possessed by the facilitator. These include the management of diversity within the interorganizational group (Bstieler and Hemmert 2010), inclusive leadership skills to guarantee a common and coherent group identity, which should be accompanied by experiencing equality among work group members (Mitchell, et al. 2015), and finally skills that encourage knowledge sharing within the group (Srivastava, Bartol and Locke 2006), and that stimulate group creativity (Davis and Eisenhardt 2011). Moreover, the facilitator is responsible for some of the before presented key factors, such as the presence of and compliance with behavioural rules, cognitive busyness to not allow for stereotype activation, and clear communication of a superordinate goal and the creation of task interdependence.

Rasmussen (2003) suggested that creative collaboration can be structured into four levels and, therefore, assigned the different core capabilities of facilitation to these four levels. According to him, creative collaboration includes (1) a physical, (2) an intellectual, (3) an emotional, and (4) a synergistic level. The first level is exclusively about creating a physical environment that allows for creative behaviour. As it is known from section 8.2.5., this would for example imply the absence of watches, phones, and computer, as well as the removal of any devices and objects that are not necessary for solving the task at hand and only redirect one's focus to other issues than the task. At the intellectual level the person in charge of facilitation is obliged to introduce the participants to process rules and make sure that these are followed. The facilitator should, additionally, avoid misunderstandings and always ensure that everyone knows what to do and what he or she is working on; he or she should encourage knowledge exchange through brainstorming and other related activities, and assume full responsibility for the planning and execution of the creative process. At the emotional level, the facilitator is asked to create a working climate that is characterized by openness and psychological safety for the purpose of making the participants feel comfortable when sharing their thought and ideas. It is, furthermore, the facilitator's task to resolve existing conflicts within the group, which requires sensitivity for the participants' feelings and needs. The fourth level presented by Rasmussen (2003) is the synergistic one. It describes a state in which the participants of the work group see themselves as united and aligned. At this level, the facilitator should make use of the existing synergistic effects and ensure that creative presence characterized by an open and playful atmosphere, a common identity, and the engagement in the task at hand are maintained. This again requires the facilitator to possess good social skills to correctly interpret and react to all kinds of communication situations. It can be concluded that at all four levels the facilitator is responsible for providing the best possible conditions that allow for creative presence and task focus in order to enhance task-related knowledge sharing and, consequently, improve the group's creative performance. This requires the facilitator to possess core capabilities in relation to general awareness, adaptability, professional knowledge about creative methods that suit different situations, and strong interpersonal skills to correctly interpret the participants' behaviours in order to make everyone feel comfortable and safe (Rasmussen 2003).

All this illustrates the key role of the facilitator with regard to the group's process and creative outcome, since the facilitator has great impact on many of the previously presented key success factors. Therefore, he or she should be carefully chosen when starting an interorganizational collaboration project.

### *8.2.7. Shared Leadership*

A further measure that is said to enhance group creativity is shared leadership which is quite distinct from the just presented process facilitation. While the latter is most likely performed by only one person, shared leadership, as the name indicates, refers to the decentralisation of decision-making power and assigning responsibility for the work group's progress to multiple member of the collaboration group (Carson, Tesluk and Marrone 2007). In short, the group can be said to have several leaders with different responsibilities.

Different researchers emphasise the positive effect shared leadership has on creative behaviour. Some highlight its importance with regard to the empowerment and autonomy of interorganizational collaboration participants (Thorpe, Gold, and Lawler 2011) because both factors are assumed to positively impact creativity (e.g., Albert and Runco 1989; Barron 1995), others argue that this type of leadership will increase the participants' motivation to engage in the task due to the fact that they feel more responsible for it (Gu, et al. 2016), and still others point out that complexity, uncertainties, and the participants' feelings of competition caused by working together with members from other organizations can be overcome by shared leadership (Wood and Fields 2007).

Since leadership does not happen in a vacuum it is suggested that whether or not leadership can be described as being successful is also dependent on other factors, such as task characteristics (Day, Gronn and Salas 2006). Task interdependence, for example, is assumed to positively moderate the relationship between shared leadership and knowledge sharing. Thus, given the right conditions, shared leadership encourages task-related knowledge exchange between the collaboration members, which is likely to positively influence the group's creative performance (Gu, et al. 2016).

Nevertheless, even though shared leadership might be accompanied by several factors that positively influence individual and group creativity, such as a feeling of equality, enhanced knowledge sharing, and increased motivation, shared leadership should also be seen in a more critical light with regard to idea generation and generally processes that require creative thinking. The previous section about facilitation clearly underlined the importance of specific leadership skills for inducing creative behaviour. It is questionable if all collaboration participants possess these skills and, therefore, if leadership responsibilities borne by every group member will have a positive effect on the work group and its creativity. Moreover, the resolution of conflicts between the participants could be a problem, since there is no involvement of an external and neutral person. The most important point of criticism that concerns shared leadership, however, is related to task focus. As it has been stated several times, task focus is an indispensable prerequisite for fully making use of one's creative potential. By allocating responsibilities to the collaboration participants when working on a creative task (such as idea generation) it is likely that some participants will concentrate both on their area of responsibility and the task at hand, which results in a divided focus and consequently does not enable the complete exploitation of one's creative potential. Therefore, in order to reduce processes losses, the concept of shared leadership should only be applied in processes that do not have creative behaviour as their main goal, such as the evaluation and assessment of the generated ideas. It is for this reason that shared leadership is not

included in the later presented overview which includes measures for reducing process losses caused by the differentiation between ingroup and outgroup in interorganizational creative collaborations (*Table 8.4.*).

### 8.3. Regular Training

This section serves the purpose of providing the reader with information about measures that can be taken by organizations in order to generally make their employees less prejudiced and more creative. The presented methods can be either applied on a regular basis, or they can be used as tools in order to appropriately prepare the chosen employees for interorganizational collaborations before they start to interact with members from other organizations.

The first subsection presents two common workplace programmes, which is, on the one hand, diversity training, and on the other hand, diversity management. This is followed by explaining the importance of awareness about one's own biases in order to consciously influence and control prejudiced attitudes and behaviours. The last subsection serves the purpose of introducing the reader to the fundamental basis of effective creativity training, which are creativity didactics. These are also referred to as 3D didactics. Finally, in order to provide the reader with the necessary information how he or she can design and execute well suited creativity training exercises or even complete creative processes, the reader is introduced to the creative platform.

#### 8.3.1. Common Workplace Programmes

The main goals of organizational programmes are, on one hand, the creation of more diverse workplaces, and on the other hand, the preparation of the employees to deal with this diversity and to work both efficiently and effectively in diverse groups (Ross 2011). Studies show that some programmes, such as diversity training, even result in generally changed attitudes towards outgroup members. Nevertheless, it should be pointed out that the results in relation to the effectiveness of diversity trainings in organizations are not that clear (Kulik and Roberson 2008). With regard to these mixed results, Enberg (2004) explained that appropriate design and execution of the training programme is of immense importance for its success. Diversity training is basically about realizing the high value of differences and making it easier for the employees to build relationships with colleagues that possess characteristics that are distinct from one's own. This is done through the development of mutual respect and understanding (Thomas 1991). Since the programmes are mostly designed for diversity in relation to the work context, a main focus in these trainings refers to challenges that arise in diverse work groups and the presentation of different methods for solving these. It is very common that diversity trainings take place in form of media presentations, seminars, and discussions (Kite and Whitley 2016).

Even though intraorganizational programmes do not include members from other organizations, and therefore might not seem suitable for the preparation for interorganizational collaborations, general attitudinal changes induced through diversity training are likely to improve one's attitude towards any outgroup, regardless of the characteristics the differences refer to. Research showed that the disconfirmation of existing stereotypes through diversity results in more openness and tolerance towards various outgroups (Gocłowska, Crisp and Labuschagne 2013), which indicates that becoming aware of the inappropriateness of only one stereotypical belief can have far-reaching consequences for

one's general attitude towards outgroup members. Therefore, it is important that organizations provide possibilities that enable their employees to interact with outgroup members, since this can increase the probability that existing stereotypes are disproved. Additionally, Crisp and Turner (2011) concluded that living in socially diverse environments enables people to meet group members of social categories that possess counter-stereotypic characteristics, which boosts creativity. In organizations, such an environment can be established through diversity management.

Diversity management aims at the creation of an organizational environment that encourages and values diversity in the workforce. The organizational system and its procedures are designed in a manner that support the achievement of this goal. Diversity management should not only consist of empty phrases, but rather also of actions that clearly show the organization's endeavour to have a diverse workforce. Thus, the employees should differ with regard to more or less salient characteristics. One should always feel accepted and valued by one's colleagues and should never feel prejudiced or discriminated due to the possession of a different background or other characteristics. Through clearly communicating that this is what the organization stands for, employees will adapt their attitudes and be more open towards colleagues that are categorized into social groups that they previously did not identify with (Kite and Whitley 2016). Due to the fact, that a diverse intraorganizational workforce enables the employees to already make experience in dealing with diverse people and creating a common social identity (Milliken, Bartel and Kurtzberg 2003), there is an increased likelihood that it is less difficult for these employees to identify with an interorganizational work group. Hence, measures taken by the organization can have a huge impact on its employees' general attitudes towards outgroup members. It is therefore important to create and maintain an organizational climate that is characterized by a positive attitude towards diversity. Cox (1993) suggested for this purpose procedures, such as the recruitment of individuals that value diversity, ensuring that the different committees within the organization consist of diverse members, and promoting appreciation for diversity through different obligatory and voluntary programmes.

Thus, it becomes apparent that the implementation of an organizational culture that values diversity through both diversity training and diversity management takes a long time and can be accompanied by high financial expenditures. However, once established, the positive attitudes and the existing openness towards individuals whose social identity is quite distinct from one's own can be very beneficial for interorganizational collaboration projects and creative behaviour in general.

### *8.3.2. Awareness about Stereotypes and Prejudice*

Research shows that stereotype activation and prejudice can be controlled if individuals have the motivation to do so. This motivation ensures that individuals neither express themselves nor behave in a manner that is perceived as prejudiced, which is why they want to avoid to act on the basis of stereotypic beliefs. However, before it is possible to be motivated to avoid prejudiced behaviour, individuals first need to become aware about that they are prejudiced (Kite and Whitley 2016). Recall from section 5.1.1. that some reactions towards outgroup members occur automatically and without one's awareness (i.e., implicit prejudices). In contrast to explicit prejudices, the possession of implicit ones requires that one receives information about one's behavioural biases in order to take measures for controlling them. When individuals receive this information and additionally some explanations about what makes them perceive people and situations in a biased way (e.g., humans' limited

information-processing capacity), they accept that they have these biases (Casad, Flores and Diday 2013). This awareness and acceptance generally results in a positive learning outcome (Morris and Ashburn-Nardo 2010), which means that individuals are willing to control their perceptual biases. Making people aware about their existing biases and providing them with techniques to counteract them can furthermore result in reduced intergroup anxiety (Stephan 2014) which positively influences cross-group interactions.

Special emphasis should be put on the fact that one's effort to avoid attitudes and behaviours based on stereotypic beliefs requires cognitive resources. This means, firstly, that one needs to have cognitive resources available for consciously controlling perceptual and behavioural biases, which could for example be done by searching for individuating information that disproves stereotypic thoughts, and secondly, that the cognitive resources depleted through conscious control, are not available for other cognitive activities (Kite and Whitley 2016). This indicates that conscious control of prejudices has negative consequences for thinking creatively, since one's cognitive resources and one's focus are divided between the creative task and one's personal task to control and eliminate prejudice. However, (Monteith, Parker and Burns 2016) assumed that people who regularly put effort into the control of prejudice, at one point, do not need to think about self-regulation of prejudice anymore, since it occurs automatically and unconsciously. This implies that even though conscious control of prejudice might not be appropriate during creative tasks, it is an effective method to minimize the effects of stereotypes on one's behaviour in the long term and should be regularly used outside of tasks that call for creativity.

That it becomes easier to negate stereotypical thoughts through regular training was also confirmed by a study conducted by Kawakami and her colleagues (2000). The research participants were trained by saying "no" each time the computer screen showed them a picture of a member of a stereotyped group in combination with associated stereotypic characteristics. They further should say "yes" each time a counter-stereotypic characteristic for a stereotyped group member was shown. Results clearly indicated that this procedure became easier the more often it was practiced. Moreover, this training reduced stereotype activation.

### *8.3.3. Creativity Training and the Creative Platform*

Ideation processes in collaboration projects require the participants to have a creative mindset in order to realize the group's creative potential. Section 8.2.3. already explained that unconscious mindset manipulation can provoke flexible thinking. This method, however, do not yield lasting effects, which in turn can be achieved through regular creativity training. Various researchers confirmed that training programmes can enhance one's creativity (e.g., Fox and Fox 2011; Byrge and Hansen 2014; Kabanoff and Bottger 1991; Scott, Leritz and Mumford 2004). Thus, creativity researchers and practitioners should not be concerned about the question of whether creativity training has an effect, but rather about the question of how to design a training with long-lasting and the best possible effects. As it is the case for many other skills, such as athletic and musical performances, improving creative thinking and maintaining a certain level of creative skills can only be achieved through regular training. Creativity training takes the form of different short exercises, which is why regular training sessions do not require much time and can be implemented without changing existing work procedures and schedules too much. Examples for such exercises from the perspective of the facilitator are presented in the appendix. Such exercises can also be used to keep the participants cognitively busy, due to the fact that they permanently attract one's focus to the

task at hand, which leads to, that no mental capacity is available for thinking about other things. Providing employees with the possibility to regularly participate in creativity trainings and presenting measures that enable them to also practice individually and independent from the offered trainings programmes is likely to positively influence their creative abilities, under the prerequisite that these possibilities are seized. It is important to note that the training sessions should not exclusively contain theoretical units on creativity, but also practical exercises that include the body and language, which is why creativity trainings are also referred to as embodied training programmes. Based on the assumption that these are well-designed and carried out on a regular basis, embodied training programmes facilitate new thinking and improve one's general creative abilities, which will have a positive impact on both one's professional and one's private life (Byrge and Hansen 2014).

The following paragraphs serve the purpose of, firstly, informing the reader about the basic elements of effective creativity training—creativity didactics—that enable individuals working in groups to think creatively, and secondly, to introduce the reader to the creative platform, which is a concept of creative processes and creative learning that can, inter alia, be used by organizations. Both the didactics and the platform are developed by Christian Byrge and Søren Hansen (2014).

Creativity didactics are developed to facilitate the application of the four principles of creative behaviour from Byrge and Hansen (2014), and thus enable one to have unlimited access to one's knowledge. Once again, the four principles are: horizontal thinking, task focus, parallel thinking, and no experienced judgment. The didactics are also called 3D didactics because this learning approach includes the three dimensions, body, language, and attitude. Byrge and Hansen suggested that one needs to work simultaneously with one's body, language, and attitude in order to be able to be creative and break existing thinking patterns. The didactics are based on the fact that body, language, and attitude are mutually interdependent, which means that changing one dimension automatically leads to changes for the other dimensions as well. This points out the close connection that exists between the brain and the body. It is even possible to influence cognitive processes through bodily experiences (Byrge and Hansen 2014).

In order to be creative, one needs to be able to think flexible and outside of one's habitual thinking patterns. Without an appropriate mindset it is unlikely that creative behaviour occurs. This is where the 3D didactics come into play, since they enable an individual to let go of existing biases and of concerns about logical relationships which usually control our mind. Rather than basing our thoughts and behaviours on previous experience and aligning them with expectations of the future, creativity didactics enable one to engage in creative presence when being together with other people.

It should be furthermore highlighted that one is capable of ignoring what the body wants one to do if certain conditions are fulfilled. These include physical and mental well-being, which is comparable to the aforementioned experience of psychological safety, and the motivation to resist what the body calls for. This means that people can replace their previously made bodily experiences through new ones if their mental and physical state accompanied by sufficient motivation enables them to do so. Positive bodily experiences are important to shape one's attitude in a manner that is conducive to creativity. Therefore, creativity exercises should actively involve the body and ensure that no one is harmed during the exercises in order to create this positive experience. But bodily experience is not the only way to change one's attitude. Recall from section 7.2. that the individuals' attitudes and behaviours in a work group mutually influence each other. This is exactly why parallel thinking

is one of the creative principles. When all members of the collaboration group are at the same place and simultaneously work on the same subtask, this results in a stronger task focus of each individual and in a higher motivation to work on the task compared to situations in which one would either work completely alone or compared to situations in which members of the group would simultaneously work on different tasks. Therefore, many creativity exercises are designed in a way that they can be executed in pairs or in small groups (3 to 4 persons) in order to optimally use the positive effects of parallel thinking. Thus, creativity training should include exercises that make use of the power of parallel thinking in order to shape the participants' attitudes and motivation in a way that is conducive to creativity (Byrge and Hansen 2014).

The 3D creativity exercises developed by Byrge and Hansen (2014) focus on the improvement of different skills that are all important for creativity. This includes the generation of ideas on command, the development of ideas by unconditionally accepting other people's ideas and elaborating on these, accepting mistakes, and making use of divergent thinking in order to transfer knowledge from one area to another. In addition, for most of the activities, the participants are required to either stand or walk in order to actively involve the body and make use of its influence on one's cognitive processes which in turn results in increased task focus and energy.

Following the framework of creativity didactics enables the participants of the collaboration project to engage in creative presence. Once the participants enter this desired state of mind, they are said to have a creative attitude. It is characterized by the following features:

- the experience of mental and physical well-being
- unconditional acceptance of generated ideas
- openness in form of curiosity and playfulness
- complete focus on the task at hand, which means neither concerns about one's self-image and social relationships, nor about previous experiences and expectations of the future
- no social mask
- entering a state of flow and forgetting about time and place
- no judging of others and no experience of being judged

All these characteristics should apply to the collaboration participants during the ideation process in order to fully make use of the work group's creative potential. As it was explained, this creative attitude can be achieved through making use of the presented creativity didactics, which is why they are highly recommended for interorganizational collaborations that call for group creativity.

Finally, organizations that want groups to be creative can make use of the creative platform, independent of whether these sessions are intra- or interorganizational. The creative platform provides one with the necessary information to design and execute a creative process based on the just presented creativity didactics. Even though creative processes can be very different from group to group the creative platform is a good starting point to be guided through design and implementing a process that is suitable for the task to be performed. Its purpose is to enhance the group's creativity by enabling each participating individual to access their knowledge in an unlimited way and to openly share it. The process contains both general creativity exercises and activities that are related to a specific task in order to help the work group to creatively solve their problem through their shared knowledge. Since the creative

platform can be used for solving any task that calls for new and creative thinking, it provides useful support for the preparation of ideation processes. It has already been used in different organizational contexts, such as projects for developing innovations or for improving knowledge flows between different departments (Byrge and Hansen 2014). If one would like to get further information about the creative platform, the following link is recommended: <http://www.uka.aau.dk/The+Creative+Platform/>.

A final remark in this section refers to the avoidance of the negative effects of ingroup-favouritism on idea generation processes of interorganizational collaborations. As previously described, creativity activities often require the collaboration with at least one other individual. Due to the fact that effective idea generation processes include several activities, the negative consequences of ingroup-favouritism can be mitigated through changing partners each time a new activity starts. As it becomes apparent from the appendix which contains examples for some creativity exercises that are designed for training different creativity skills, such as generating ideas, the facilitator of this session should make sure that partners are changed each time before a new activity starts.

#### 8.4. Overview

This section provides an overview about the just presented measures to seize the group's creative potential and reduce process losses in interorganizational creative collaborations caused by differentiating between one's ingroup and the outgroup. This is generally done by reducing prejudice and intergroup anxiety through facilitating the development of positive attitudes towards the outgroup and interactions with outgroup members, which finally could even result in the creation of a new ingroup, and thus a common group identity. Furthermore, the work group climate should be characterized by psychological safety and open communication in order to ensure knowledge sharing which is indispensable for the creation of creative outcome. *Table 8.4.* lists the relevant factors that are to be considered when striving for reducing the negative consequences of differentiating between ingroup and outgroup in interorganizational collaboration projects. The provided list should not be understood in such a way that all the measures need to be taken in order to seize the group's creative potential, it rather provides an overview about what potentially could be done. It is at the discretion of the responsible persons for a project which of these methods will finally be implemented. This decision should be, inter alia, guided by the project's importance and the financial and time resources that the project has at its disposal.

## Measures for reducing process losses caused by the differentiation between ingroup and outgroup in interorganizational creative collaborations

- Institutional support in the form of diversity training and management
  - Creation of awareness about stereotypic beliefs and prejudices
  - Regular creativity training based on the creativity didactics
- } regular/permanent measures
- Group composition
  - Extended contact
  - Imagined contact
- } before the collaboration
- Unconscious mindset manipulation
- } directly before and during the ideation process
- Superordinate goal and task interdependence
  - Cognitive busyness
  - Presence of behavioural rules
  - Process facilitator
  - Acquaintance potential
- } during the ideation process

Table 8.4.: Measures for reducing process losses caused by the differentiation between ingroup and outgroup in interorganizational creative collaborations.

Own table.

## 9. Discussion and Implications

First of all, it should be pointed out that many of the studies conducted in relation to the psychology of prejudice refer to the intergroup relations of individuals that differ with regard to their ethnicity. Nevertheless, it seems reasonable to assume that the issues concerning the encounter of these groups are also transferable to other intergroup situations. This is based on the fact that the cognitive process that underlies the differentiations between any social groups is always categorization. As previously explained, categorization means sorting people that appear to have specific characteristics, attributes, and behaviours in common, into different social groups. It seems not to be important, whether these characteristics are visible (e.g., gender, skin colour, age) or not (e.g., organizational affiliation, favourite sports team, favourite food), but rather whether or not the differences are perceived by the individual that sorts people into the specific social groups. It, therefore, can be assumed that challenges arising during the encounter of two specific social groups are likely to also be present when two other social groups are interacting.

Even though the thesis is related to interorganizational collaborations, due to the general validity of the presented intergroup relation theories, it can be assumed that the propositions developed for the cross-organizational context also apply to any other situation in which different groups encounter each other. This means, for example, that prejudices also have an impact on intraorganizational projects that include individuals from different departments. The departments, in this case, form the basis for differentiating between one's ingroup and an outgroup. Therefore, the presented negative consequences of prejudice for creative collaborations are likely to be of immense importance for every organization that strives for group creativity in any form. Considering that some companies are more innovative, and thus, more successful than others, it appears reasonable to think about if it is partly the difference with regard to prejudice that leads to the circumstances that some organizations are more successful than others. Thus, innovative and creative companies would be characterized by low prejudiced employees that are open towards new experiences, tolerate ambiguity, complexity, and uncertainty, and do not rely on habitual thinking patterns but rather use unconventional thinking methods. Moreover, these companies may have a stronger focus on some of the methods that were presented in order to reduce prejudice and enhance creativity. Assuming that this proves to be true, organizations that strive for improving their innovation capability could already begin with it by hiring people that are low in prejudice and that are more creative. In order to find out about the respective prejudice and creativity scores, measures for evaluating these traits could be integrated in the employee selection process. Due to the fact that such assessment methods already exist, companies only need to choose which ones they would like to use. Furthermore, it is argued that regular creativity training is also an effective method to enhance people's individual creative abilities, by changing their habitual thinking patterns and making them generally more open towards, and less anxious about new experiences. Companies that regularly execute projects that call for creativity should consider to offer such a training to the participants of these projects. However, organizations need to assess whether or not the anticipated expenses for implementing such a training is worth its results. The methods presented in chapter 8 vary enormously with regard to the resources they require, which is why it is at the enterprise's discretion to decide what financial and time resources it is willing to invest in the reduction of prejudice and the enhancement of creativity. This investment should, inter alia, depend on the significance of the respective project and contextual factors, such as the participants' motivation to conduct this project.

A further topic that is worth investigating refers to the impact of prejudice on learning in group projects. As it was previously mentioned, many interorganizational projects (and probably also intraorganizational projects) are established for learning purposes. Korb, Geißler and Strauß (2015) stated that members of a group can learn from each other provided that these are willing to cooperate. Due to ingroup-favouritism the willingness to cooperate, at least with members that are perceived as outgroup members, is not likely to occur. Thus, collaboration participants need to perceive all the other participants and themselves as being members of only one common group, in order to circumvent ingroup-favouritism. It is for this reason that many papers that are concerned with interorganizational collaborations highlight the importance of trust and unity for a successful collaboration (e.g., Andersen, Kragh and Lettl 2012; Najafian and Colabi 2014). Nevertheless, explaining this importance on the basis of the differentiation between ingroup and outgroup barely was done, which could be an indication for, that the effect of categorization processes on intergroup cooperations are either underestimated, or not recognized.

An additional comment refers to diversity in organizational groups. It was explained that diverse groups possess more creative potential compared to homogenous groups. Nevertheless, it was also explained that too much diversity is detrimental to creativity, which is why one needs to find the right balance between similarities and differences within the working group. Even though this appears to be simple in theory, in practice, this represents a major challenge to those people that are responsible for the composition of a work group. It would therefore be valuable to develop some more practical guidelines for the creation of groups that are diverse, but not too diverse, in order to generate an optimal starting position for creative collaboration.

With regard to diversity, it might be interesting to investigate the impact of other differences (e.g., culture, age) on group creativity in interorganizational collaborations. While this thesis was only concerned with differences with regard to organizational affiliations, the members of these organizations might also differ with regard to other characteristics. Especially when considering cross-organizational collaborations that include organizations from different countries, it would be interesting to investigate the impact of this additional difference. It seems likely to assume that the effects resulting from the differentiation between ingroup and outgroup are even increased when the two groups differ in more characteristics than only their organizational affiliation. This could, for example, also be the case when organizations work together that differ in relation to the age of the employees (i.e., a group with participants that are relatively young works together with a group whose participants are relatively old).

A further issue concerns possible cultural differences with regard to the categorization process. Based on, that the majority of the developed theories and studies conducted included researchers and research participants from the western society, it is possible that results of these studies might have yielded different results if they were conducted in a different part of the world. Due to the fact that one's culture and society constitute an important part with regard to the development of prejudice, and also with regard to the social acceptance of prejudice, their might be cultural differences in relation to the way in which categorization processes occur, and also in relation to the extent to which categorization processes noticeably influence people's behaviour.

Since it was explained that the physical encounter of members belonging to different social groups is accompanied by various negative effects on creative collaboration between these members, using tools that allow for anonymity of the collaboration participants, while

still being able to exchange knowledge and ideas, seems to be an appropriate method to circumvent the negative effects. Thus, virtual teams and digital methods to exchange ideas appear to be suitable measures that can solve the problem with regard to anonymity, and therefore enhance group creativity. Even though electronic brainstorming might, at first glance, be perceived as the ultimate solution to the problems that arise in creative collaborations, one should also be aware of the limitations it implies. Thinking back to the eight principles for group creativity that were presented in the literature review, not all of these principles can be applied to electronic exchange of ideas. For example, the effective sharing principle is only partly achieved. Due to the fact that collaboration participants do not have to be afraid of being evaluated negatively, they are probably more likely to share all their thoughts. However, effective sharing is also dependent on one's personal motivation to share ideas. This motivation can be increased through a positive group climate, which might be, dependent on the circumstances, harder to achieve when communication exclusively takes place via electronic media. Moreover, the effectiveness of this communication tool for the purpose of exchanging knowledge should be questioned. Based on that some knowledge is difficult to transmit through exclusively using words, it seems reasonable to assume that electronic brainstorming is not appropriate for the exchange of all kinds of knowledge. Additionally, the principle of parallel thinking cannot be applied when people participating in the collaboration are physically not in the same room. This causes that a shared task focus cannot be created. However, problems regarding experienced judgment and person focus instead of task focus can be eliminated through not being physically together. Nevertheless, this does not automatically mean that one exclusively focuses on the task, since task focus is highly dependent on the environment one is situated in during the idea generation process. Thus, with regard to electronic brainstorming, it can be concluded that it reduces some of the problems that arise in creative collaborations, while at the same time also causing new problems. When deciding for or against such a method, one should consider the type of knowledge that is wished and expected to be exchanged.

Finally, even though this thesis seems to demonstrate that creative collaboration between members belonging to different social groups without the consideration and application of some of the presented methods in chapter 8 is not possible, it should be explicitly mentioned that this is not the case. However, it was intended to illustrate that holding prejudice results in process losses, which means that a group's creative potential cannot be fully exploited. Due to the limiting effect that prejudice generally have on people's cognitive flexibility and therefore also on their creative behaviour, the challenges arising through holding prejudice should not just be a concern for organizations that strive for profit, but also for other institutions that aim for novel and useful insights through creative collaboration, such as universities. Also these should apply methods and offer regular training in order to reduce prejudice and enhance creativity. A positive example can be given with regard to Aalborg University. Even though not explicitly mentioned in the purpose of the problem based learning (PBL) approach that this university takes, the PBL model can be assumed to have an important role for students' attitudes towards new experiences. It basically means that students work in groups while applying problem oriented methods in preparing projects of a high academic standard (Aalborg University 2017). This means that students regularly are encouraged to collaborate in teams, which provides them with group work experience. This, in turn, gives them (hopefully positive) experiences with regard to group work and is likely to reduce social and intergroup anxiety. Moreover, it is explicitly stated that PBL serves the purpose of acquiring new knowledge and skills, and developing abilities within teamwork (Aalborg University 2017). The PBL model recognises the

educational, academic, and social value that group work contains, and forms the students' attitudes in a way that they develop cognitive flexibility and a positive attitude towards group interactions. It would therefore be interesting to investigate if students from universities that apply the PBL approach score lower in prejudice and higher in creativity compared to students from universities that do not use this approach. Finally, it is not only organizations and institutions that would profit from having less prejudiced and more creative members, but also the society as a whole. Based on subchapter 7.4. that illustrated the contrary nature of creativity and prejudice, it can be concluded that more creative people are also less prejudiced people. Considering current world news and all the intergroup conflicts and therefore also prejudice they contain, it appears logical that generally reducing people's negative attitudes towards outgroup members and changing these into more positive, or at least neutral ones, could solve many existing problems. Thus, a society with members that are more creative seems to be beneficial for creating a more peaceful world, which should cause politicians to develop an increasing interest in people's creativity and take measures that enhance their creative abilities, such as by integrating creativity programmes into the curriculum of every public educational institution.

## 10. Conclusion

The literature review underlined the importance of the maintenance and continuous improvement of an organization's innovation capability in order to survive in the dynamic and permanently changing market environment. It was explained that this capability, and thus, the organization's success, is closely related to the group's creative performance in interorganizational collaborations. It is therefore that firms should strive for the facilitation of an effective collaboration between the work group members. Due to the fact that the collaboration's outcome is influenced by various cognitive, motivational, contextual, and environmental factors, organizations should positively influence these factors to increase the likelihood of an effective performance. However, some factors are easier to influence than others and/or might have a greater impact on the work group. At the beginning of this thesis, it was assumed that prejudices belong to those factors that highly impact group processes and therefore constitute a crucial factor for the creative performance of the collaboration group. Three research questions were answered in order to theoretically explain and support this assumption.

The first one referred to how prejudices arise in interorganizational collaborations. Before the actual question was answered, the distinction between stereotypes and prejudices was underlined, in order to understand that holding beliefs about a specific social group (i.e., stereotyping) is not to be equated with one's attitude and behaviour towards members of this group (i.e., being prejudiced). However, it was shown that stereotypes can lead to the development of prejudices. With regard to this, the distinction between stereotype activation (i.e., the extent to which a stereotype is accessible in one's mind) and stereotype application (i.e., the extent to which one uses a stereotype to judge a member of the stereotyped group) is of immense importance. After this distinction has been made clear, the first research question was answered by analysing different intergroup relation theories and transferring their content to the interorganizational context. The social identity theory forms the fundamental basis for the development of prejudices. Individuals use categorization processes for simplifying their environment and handling the large amount of information they are almost permanently confronted with. Categorization includes that individuals sort people that appear to have specific characteristics, attributes and behaviours in common into different social groups. Additionally, individuals also categorize themselves, which provides them with a social identity. This means that they identify with a specific social group which is termed as their ingroup. Everyone else who is assigned to this group is a member of the ingroup, while people that are not part of this group are perceived as belonging to the so called outgroup. This cognitive distinction between ingroup and outgroup forms a key part with regard to the development of prejudices. It is argued that the mere differentiation between the two groups result in the development of prejudices towards outgroup members. For the interorganizational context, this means that once the collaboration participants make a distinction between those people that belong to their own organization and those that do not, prejudices automatically arise. The development of prejudices is intensified by the perception of competition and the perception of relative deprivation or gratification. Moreover, prejudice and intergroup anxiety are closely related which complicates the intergroup collaboration.

Based on the assumption that the propositions made with regard to the development of prejudices in collaboration projects prove to be true, the negative consequences of prejudices for group creativity in the ideation process in interorganizational collaborations (i.e., the second research question) were illustrated. It was explained that the group's creative potential is determined by the group composition and the diverse task relevant skills that the

project participants bring to the group; whereas the realized potential depends upon the group processes that occur throughout the collaboration. Organizations should strive for reducing processes losses with regard to group processes in order to fully realize the group's creative potential. On the basis of theory, it was explained that prejudice is an important factor that can result in processes losses. More concrete, it was shown that prejudices and the related differentiation between ingroup and outgroup cause, firstly, that collaboration participants identify less with the work group, secondly, ingroup-favouritism, thirdly, a divided focus, and fourthly, intergroup anxiety. All this is accompanied by several negative consequences that result in process losses and, hence, in an incomplete realization of the work group's creative potential.

The third research question was concerned about practical measures that can be taken in order to reduce the negative effects of prejudices on group creativity in ideation processes in order to fully seize the group's creative potential. It was shown that dependent on the respective point in time the collaboration process is situated in, different methods can be applied to improve the group's creative performance. Regular or permanent measures include, firstly, institutional support in the form of diversity training and management, secondly, the creation of awareness about stereotypic beliefs and prejudices, and thirdly, regular creativity training based on the presented creativity didactics. Further measures that can be taken before the actual collaboration refer to the group composition and indirect contact (i.e., extended contact and imagined contact). Moreover, right before the first encounter of the collaboration participants, unconscious mindset manipulation can be used as a method to provoke a creative mindset and therefore reduce prejudiced attitudes. Finally, the group's performance in the ideation process can positively be influenced by providing the work group with a superordinate goal that is accompanied by task interdependence, by keeping the participants cognitively busy, by having established behavioural rules, by allowing for acquaintance potential, and by having a process facilitator. Which of these measures are taken is at the discretion of the organizations. This decision should be influenced by the availability of financial and time resources and the importance of the outcome of the established collaboration.

All this clearly showed that group processes and the related prejudices are of immense importance for the creative performance of work group, which is why it is difficult to understand that researchers in this area were strongly concerned with the importance of cultural, contextual and organizational factors with regard to creativity, while neglecting the importance of group processes for creativity (c.f., Paulus and Nijstad 2003). It is therefore that this thesis was intended to emphasize these often neglected processes by illustrating the impact of prejudice on group creativity.

Finally, the thesis not solely answered the three research questions, but also illustrated the generally contrary nature of prejudice and creativity, which pointed to the value of creativity not only in the organizational context, but also with regard to the society as a whole. The chapter concludes by providing the reader with an overview about the given answers to the three research questions by making use of the previously presented formula that explained that the actual group creativity is determined by the group's creative potential minus the processes losses (see *Figure 10*).

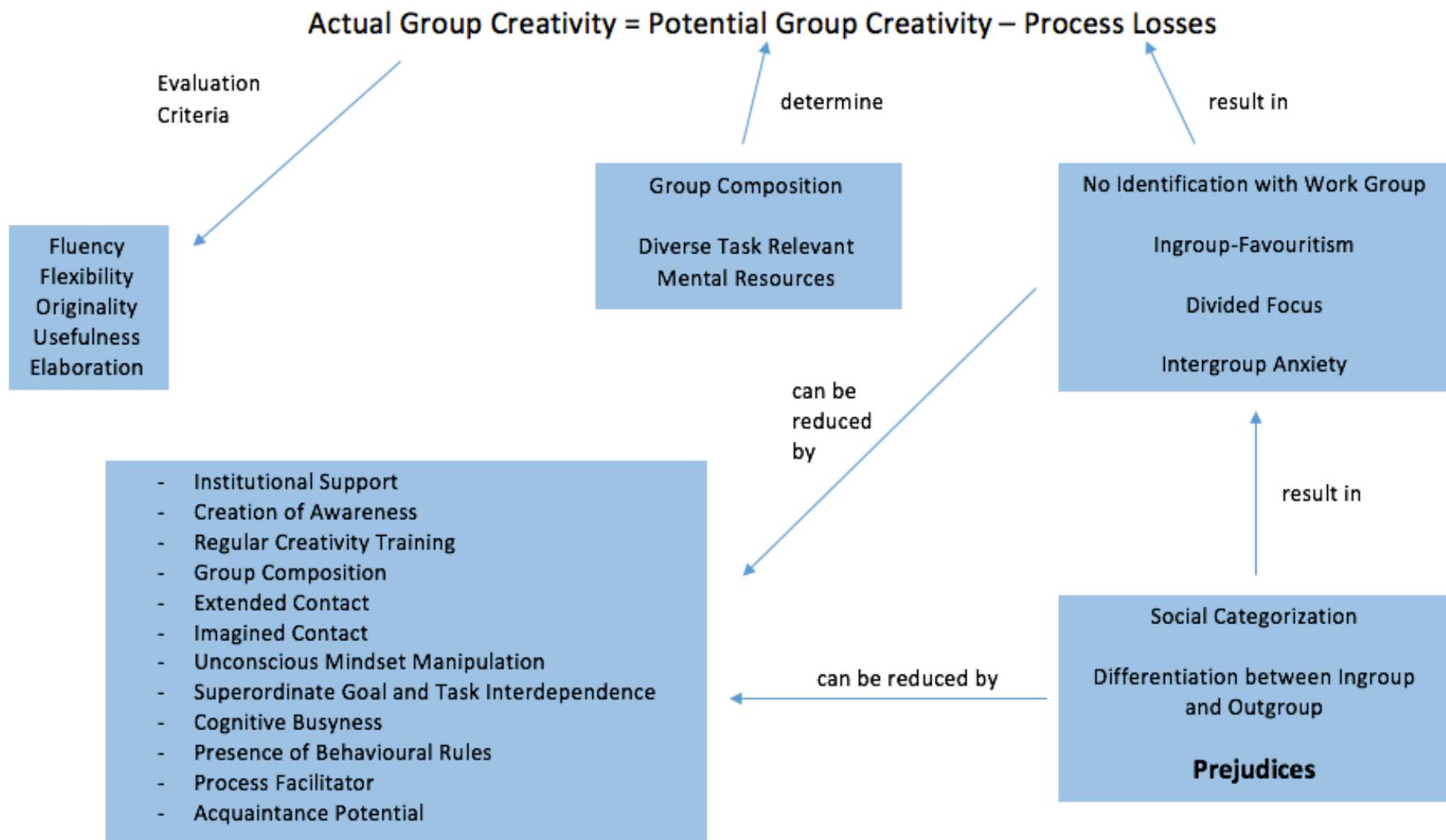


Figure 10.: Prejudices as reason for process losses.  
Own figure.

## Appendix

In the following, five examples for small creativity activities are provided. They are usually carried out before the idea generation process, or the creative process in general, in order to make sure that the participants start the process with a creative mindset. They are presented from the perspective of the facilitator, meaning that they provide the instructions that the facilitator should give to the participants. It is important to do one step after another. As previously mentioned, these activities inhibit ingroup-favouritism by inviting the process participants to change partner after each activity. Moreover, these activities, if carried out correctly, keep the participants cognitively busy so that they do not have any time to think about other things than the task at hand. It is important to make the instructions as clear as possible that participants have no doubt about what they are supposed to do. It is for this reason that some activities require a demonstration from the supervisor. More exercises and clearer instructions how to execute the activities can be found on this web page: <http://www.uka.aau.dk/The+Creative+Platform/Process+modules/> which was also the source for the five given examples.

### 3D Case: Clap 1 2 3

1. Please stand up
2. Get together
3. Find together two and two with the same hand temperature
4. Raise your right hand in front of each other – when I say ONE you clap them together (say ONE 3-4 times)
5. Do the same with the left hand on TWO
6. Now with both hands in front of each other on THREE
7. Now I count ONE, TWO, THREE, ONE, THREE, TWO, THREE...
8. Now the same with closed eyes (start counting slowly)

### 3D Case: Yes, we made a mistake

1. Please stand up
2. Get together
3. Think about your favourite fruit and find a partner with the same favourite fruit
4. Stretch your arms above your head and say “Yes, we made a mistake” (doing it 3-4 times)
5. Now play “stone, paper, scissor” together – when you do NOT have the same, stretch your arms and say together “Yes, we made a mistake)
6. Demonstrate

### 3D Case: Exchange presents

1. Please stand up
2. Get together
3. Think about your car/bike colour and find a partner whose car/bike has the same colour
4. One mimes that he/she gives the other a present (without saying what it is)
5. The person receiving the gift says what he/she received as a present
6. Demonstrate
7. It is important that it is the first thought that comes to your mind that will be used to explain what you have received as a present
8. If the present is too private, you just say "thanks"
9. Whoever lives closest to here starts

### 3D Case: The day backwards

1. Please stand up
2. Get together
3. Think about in which quarter of the year you are born and find a partner who is born in the same year
4. Tell your partner what happened today from when you walked into this room and go backwards until you opened your eyes this morning – You get one minute each, and I will tell you when to change
5. Demonstrate
6. The one with the brightest trousers/skirt starts
7. Make them change after one minute

### 3D Case: Mars 2010

1. Please stand up
2. Get together
3. Think of your favourite colour and find a partner with the same favourite colour
4. Each person receives a stimuli card with pictures on (they are not allowed to look at it!)
5. Imagine that you will travel to the Mars and need to organize the journey. Use the stimuli card (only one picture per time) as an inspiration of what you should bring to the mars and tell you partner
6. Accept all ideas and develop them
7. Demonstrate
8. The one who most recently left the country starts

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