BACHELORTHESIS

SUPPORTING CREATIVITY IN ORGANIZATIONS

Research considering predictors of perceived *and* expressed *support for creativity in organizations*

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ABSTRACT

The current research considers the role of support for creativity in two studies, respectively the *perceived* and *expressed* support for creativity. Study one uses a multilevel analysis ($n = 2996$) to investigate whether individual and organizational characteristics explain the climate for creativity employees perceive, using Ekvalls' nine-dimensional model for the climate for creativity. Findings suggest that mostly individual characteristics (age, gender, educational attainment, and organizational tenure) explain employees' assessment, as opposed to organizational size and industry. It was concluded that employees will constitute their own representation of the work environment, but that a significant part remains to be explained on the organizational level, which was not accounted for by size and industry. Study two ($n = 131$) uses surveys to investigate employees' attitudes towards creative traits to measure the support employees express towards creative traits and new ideas. It was found that people show less support for creative traits as opposed to non-creative traits. Especially people who support non-creative traits showed a wrong understanding of creativity. Subsequently, this expressed support is explained using the climate for creativity and the prevention and promotion focus, in which the latter are expected to fulfill a mediator function. Results show that no mediator structure is distinguished, though both the promotion focus and the climate for creativity partially explain the support employees express towards new ideas. It was concluded that a paradoxical role for creativity in organizations was confirmed, and that this paradox was explained by the organizational climate.

PREFACE

About 18 months ago, I reinvested in my own creativity for the first time since leaving high school. For weeks in a row, I would loose myself in the projects I started. I could work all night; drawing still lifes in ink, editing photo's. I regularly was surprised to find the sun already up. This intense, positive, experience made me curious toward the concept of creativity and its' causes and consequences. Right now, after digesting all the literature I could find, the curiosity and engagement to the concept continue. When people asked how this project was progressing, I made sure to ensure them of the joy I felt when working, before admitting that at times the demands felt overwhelming.

This project is emerged verging on both sociological and psychological grounds. The number of e-mails and letters I had to send to be able to do this project had made me skeptical about the climate for creativity within the university. However, my supervisors Anne-Rigt Poortman and Maria Peeters created a creative climate that, as I am convinced, fosters the achievements of students. At least, they fostered mine, for which I am deeply grateful. I will conclude by expressing my personal understanding for the respondents that did report not to support creative traits, but nevertheless I want to express the intention to be conscious about my attitudes toward creative traits of future colleagues.

Never stop wondering. Never stop wandering.

Lisanne Biekart
June 20th, 2014

CONTENTS

INTRODUCTION

In this increasingly globalized world, organizations have to ensure their innovativeness in order to survive the demands of the fast changing societies surrounding them (Isaksen & Lauer, 2002). Industries that are connected to innovativity pur sang, like companies in the field of technology and design, feel this pressure, but also governmental agencies put increasingly more emphasis upon their innovativeness. This indicates a widespread awareness of the long-term importance of innovativeness for organizational growth and survival (Dilleilo, Houghton, & Da1wley, 2011). Though not synonyms, innovativeness is strongly associated with generating creative ideas within an organization – creative ideas are novel and useful ideas preceding the development of innovative products (Hunter, Bedell, & Mumford, 2007). Woodman, Sawyer and Griffin (1993) therefore see creativity as a subset of the broader domain of innovation. According to Woodman, Sawyer and Griffin, innovation in turn could then be seen as a subset of 'organizational change' – together forming a 'complex social system' within the organization. Hence, creativity is contributing to innovation and organizational change and subsequently to an organization's performance.

Many antecedents of creative performance have been put forward. The emphasis in this field started with creativity as a personality trait, but more recently research started focusing on creativity as result of the context, often organizational characteristics (Zhou, & Hoever, 2014). According to Zhou and Hoever, nowadays often both individual and contextual factors are included in order to explain creative behavior, creating a growing practical value of the studies considering creativity. Although most research on creativity in organizations focuses upon creative behavior of employees or creative performance of the organization, current research will highlight a different perspective. The two conducted studies are both focused upon the support for creativity. More specifically – the first study measures the *perceived* support for creativity, and will explain this using both organizational and individual characteristics. Perceived support is the extent to which an employee feels supported by the organization in its creativity (Rhoades, & Eisenberger, 2002). The second study is focused upon the *expressed* support by employees. Expressed support conceptualizes the support an employee gives to its' colleagues, and will thus be the active counterpart of perceived support.

Recently support for creativity gained more attention in research. In this, creativity has been found to have a paradoxical role in organizations. On the one hand, according to Kaufman, Davis and Beghetto (2012) few people would argue that creativity is unimportant, nor do organizations. For example, plenty of vacancies include a request for creativity as a part of their profile description, showing its' perceived importance in the organization. Also individuals tend to report to value creativity (Kaufman, & Beghetto, 2013). However, both individuals and organizations are found negatively biased towards creative behavior (Westby, & Dawnson, 1995; Aljughaiman, & Mower-Reynolds, 2005; Fillipi, Grabher, & Jones, 2007), creating an environment that is not fostering creativity – on the contrary. Research deeper considering these values, often finds that creativity is actually punished

(Thompson, 2013). Thompson (2013) concludes in that the creative aspect of team work is 'the least understood […] and the one that managers and leaders most often unknowingly sabotage'. This inherent antagonistic view towards creative behavior shows a paradoxical role of creativity within organizations.

A field of expertise that considers the environment that does, or does not, welcome creativity, examines the *climate for creativity,* which plays a central role in current project. This climate for creativity is a derivative of the organizational climate since it considers employees' perceptions regarding the support for creativity. If the climate in an organization is found beneficial for creativity and innovation within the organization, this is called a *climate for creativity* (Hunter, Bedell, & Mumford, 2007; Bower, 1965; Ekvall, 1986). Such a climate promotes the generation, consideration and use of new products, services and ways of working (Isaksen, 2007), and is therefore of importance for organizational functioning.

The aim of this research project is to explain support for creativity, to pursue a further understanding of a possible paradox for creativity. This will be done in two separate studies. Study 1 will examine the organizational and individual characteristics that function as antecedents for the perception of the organizational climate for creativity, the *perceived* support for creativity. Study 2 will take a closer look on the expressed support for creativity by individual employees. More specifically, this second study will suggest that the better the climate for creativity, the more an individual will support creativity. First, a general theoretical framework upon support for creativity will be provided. More specific theories and contributions will be addressed in the two studies separately.

CREATIVITY: CONCEPTS and MEASURES

This chapter will provide a more general background for the concepts and measures that are commonly used in this field of research. This framework is provided in order to explain the view towards creativity, since different views are enhanced in- and outside of this field of research (Kaufman et al. in Mann, & Chan, 2012). It is important to understand the view towards creativity that is implicitly enhanced throughout this project, to understand the scope of current research. Three closely related concepts, *creativity, organizational creativity,* and the *climate for creativity* will be explained.

Creativity, organizational creativity and the climate for creativity
The concept of creativity is often defined as consisting of two components. The first is the novelty or originality of creative ideas. Most laypeople use this perspective on creativity (Kaufman et al. in Mann, & Chan, 2012), but research adds a second component; the product must also be practical, appropriate for the task. This second component clarifies that creativity is an important part of the ability to solve problems, contributing something of permanent significance (Csikszentmihalyi, 1996).

Although creativity itself is not explicitly measured throughout this project, implicitly Amabiles' (1997) *componential theory* of creativity is enhanced. In the past, creativity is looked at thru two different lenses. In conventional research, creativity is seen as extraordinary. In this view, a few creative people are distinguished from the 'mass of non-creative people' (Fox, 2011). On the other hand, as proposed in the componential theory, creativity can be looked at as an everyday activity, a more common trait than creativity in the former view. This theory assumes that all humans with normal capacities will be able to think creative. As Thompson et al. (2007) argue, creativity, in this second view, is an aspiring characteristic that all people can possess, which should be encouraged like an engine of progress. This latter view is the lens that will be used throughout this project; creativity in the day-to-day manner, creativity seen as a way to solve problems, creativity as practiced in most modern organizations.

Amabiles' componential theory of creativity can also be applied specifically to organizational creativity as argued by Thompson (2013): "all human labor contains both creative and non-creative elements, though clearly the balance can be radically different" (p. 627). The organizational context is increasingly included in creativity research. In this evolvement, the context also found its' way to the conceptualization of creativity: studies considering creativity at organizations often use the concept *organizational creativity*. This term includes, according to Woodman, Sawyer and Griffin (1993), both components of creativity (novelty and practical value), but placed within an organizational context. This organizational context if often conceptualized as the *climate for creativity* (Andriopoulous, 2001). Consideration of the *climate for creativity,* an organizational climate that enhances *organizational creativity*, therefore is important for all human labor.

The organizational climate is conceptualized by Ekvall (1991) as "observed and recurring patterns of behavior, attitudes and feelings that characterize life in the organization". Thru this process of recognizing patterns, employees assign meaning to their environment, make sense of the context they are working in (Dickson, Resick, & Hanges, 2006). Other researchers have expanded this definition; according to Scheider, Ehrhart and Macey (2013), the shared experience of these patterns defines the organizational climate. Therefore, two theoretical strands can be distinguished - the *cognitive schema approach* and the *shared perceptions approach* (Anderson, & West, 1998). The former suggests that individuals construct a representation of their work environment. Hence, all individuals will experience a different psychological meaning and significance of the organizational climate. The shared perceptions approach sees the climate as the shared perceptions among employees of organizational policies, practices and procedures. According to Anderson and West, the cognitive schema and the shared perception approach are 'compatible with one another and are thus not mutually exclusive' (p. 236). Current research will verge on both sides of the argument; in the sociological practice the combination of shared perceptions and cognitive schema are closer looked at, and in the psychological practice it is assumed that the climate for creativity that an individual perceives explains his or her attitudes, using a more cognitive schema approach.

The importance of organizational climate has been stressed by many scholars to influence creativity and innovation in organizations (Hunter, Bedell, & Mumford, 2007; Isaksen, 2007). A model of organizational change, proposed by Isaksen, sees organizational climate as an intervening variable, modifying organizational and psychological processes, and therefore affecting individual and organizational performance. As said, if the climate in an organization is found to promote the generation, consideration and use of new products, this is called a *climate for creativity* in the literature (Hunter, Bedell, & Mumford, 2007; Bower, 1965; Ekvall, 2007; Isaksen, 2007). Hence, the climate for creativity is a specific derivate of the molar organizational climate. Summarized is a creative idea characterized by novelty and practical value, also within organizations. Organizations that have an organizational climate that support creativity, are said to have a climate for creativity, one of the key concepts of current research.

Common measures in climate research

Since the concept 'climate for creativity', of course, are entwined with the measures, and this concept will be used throughout both studies, it was decided to discuss the used model to measure the climate for creativity below. Often, the organizational climate is measured thru the perceptions of employees. Subsequently, these perceptions are aggregated to result in a measure of the climate that characterizes an organization. This aggregation is needed since the level of theory (organizational climate) is the organizational level, resulting in a gap between the level of data and the level of theory (Schneider, Ehrhart, & Macey, 2013; Dickson, Resick, Hanges, 2006). To narrow this gap, research on organizational climate is often designed using the *referent-shift consensus* model (LeBreton, & Senter (2008). By formulating survey items referring to attributes of the organization instead of individuals' personal perspectives, the referent-shift consensus model tries to anticipate this gap. Many theoretical models to capture the concept of a climate for creativity, with an exaggerating total number of dimensions, have been proposed by scholars in the field. In this project, a nine dimensional model as proposed by Ekvall in 1986, in the *Situational Outlook Questionnaire* (SOQ) will be used.

Ekvalls' model, as used in the SOQ consists of nine dimensions, each found to contribute to the innovativeness of the organization (Isaksen, Lauer, Ekvall, Britz, 2001). The nine dimensions were retrieved after a literature review within this field of expertise. The questionnaire has been used for over thirty years, and has been revisited five times; that way the structure of the dimensions was adapted to recent findings. According to Isaksen and Aerts (2011), the SOQ is a good measure for the "cognitive basis for idea generation in organizations, and encourages the implementing of ideas while it demonstrates acceptance and recognition for the individual's creative efforts" (p.13). The nine dimensions that are used in the SOQ to capture the climate for creativity, are described below in Table 1.

Table 1.

Nine dimensions of the Situational Outlook Questionnaire.

Challenge and Involvement	This dimension focuses on the extent to which people are involved in daily operations and organizational visions and find their work meaningful. A high score means that people are highly intrinsically motivated and want to contribute to the success of the organization. A low score on this dimension means a lack of interest in the organizational processes.
Freedom	This dimension refers to the independence of employees' behavior. People experience autonomy and feel free to take initiatives and form their own plans.
Trust and Openness	Trust and openness imply an emotional safe climate. Employees respect each other and feel emotionally supported. A low score on this dimension means difficulties in the communication and a suspicious attitude.
Idea-Time	Idea-time refers to the amount of time that can be spend on elaborating new ideas. Employees experience opportunities to work on their impulse ideas which are not included in the task description
Playfulness and Humor	This reflects whether the atmosphere is perceived relaxed – plenty of jokes and laughter will occur. A climate scoring low on this dimension is characterized by seriousness and stiffness, jokes are seen as inappropriate.
Conflict	To what extent exist personal and emotional tensions among employees? Employees will dislike one another, and struggles are experienced daily. People experience gossip. The conflict dimension is the only dimension among these nine which is detrimental to creative performance
Idea-support	Which ways are used to view new ideas? Are they received in an open, professional ways by others? Idea support is high if people listen carefully and consider new ideas.
Debate	An organization will score high on debate if plenty of perspectives and viewpoints are taken into account – if the organization fosters disagreement in a positive way, to hear as many voices as possible, people will be keen on showing their idea.
Risk-taking	The tolerance of ambiguity. Organizations that score high in risk-taking, are open for decisions that do not yet have the certainty that is desired.

A first reason to choose the SOQ was because of the valuable perspective in the debate described above. The SOQ combines both the individual and organizational level of reasoning. Ekvall (1996) proposes the organizational climate as an organizational reality, without ignoring the value of individual perspectives. Climate is seen as a cognitive appraisal of the individual, taking personal values into account (Isaksen, & Akkermans, 2011). Additionaly, Isaksen and Akkermans add the belief that employees have a sense of shared meaning – therefore, the data can be aggregated into a single score for the organization. This reasoning is an important prerequisite of this project; Ekvalls' model can be used in a sociological, as well as a psychological study. The authors acknowledge the individual perceptions (cognitive schema approach), but based on the shared meaning within a group (shared perceptions approach), the scores can be aggregated.

Secondly, this model has also been chosen since the SOQ has been scrutinized for its' external validity multiple times. Concepts that were theoretically expected to show a relationship with the SOQ

items, indeed were found to underline the external validity of the SOQ. The nine dimensions have shown a strong correlation with work-related stress (Talbot, 1992). Higher scores on dimensions that foster creativity are associated with lower levels of stress. Autonomy, often named as one of the most important antecedents of organizational creativity, is found to correlate positively with four dimensions of the SOQ: Freedom, Trust, Idea-Time and Risk-Taking. In addition, since it is an attribute of ones' job, autonomy itself is not a dimension of the SOQ (see for instance work psychological models like the Job Characteristics Model of Hackman and Oldham, 1975), rather than a characteristic of the climate for creativity. Moreover, the predictive validity was underlined by findings that the SOQ can distinguish between stagnated and innovative organizations, based on the number of patents obtained, originality and success in developing and launching new products and services. At last, the SOQ was found to be effective in discriminating levels of creativity in teamwork (Isaksen, & Lauer, 2002). These studies suggest that the SOQ is a valid measure of the concept *climate for creativity*.

The present research

In the present research, two studies explore the climate for creativity. More specifically, this research considers the support that exists for creativity, both on the organizational and the individual level. As shown in Figure 1, the first study will examine the explaining roles of both micro and macro correlates for the climate for creativity. The second study conducts a study towards the enhancing role of a climate for creativity for the amount of support for creative personality traits as expressed by individual employees, implying the received support for creativity. Both studies use the Situational Outlook Questionnaire to assess the climate for creativity.
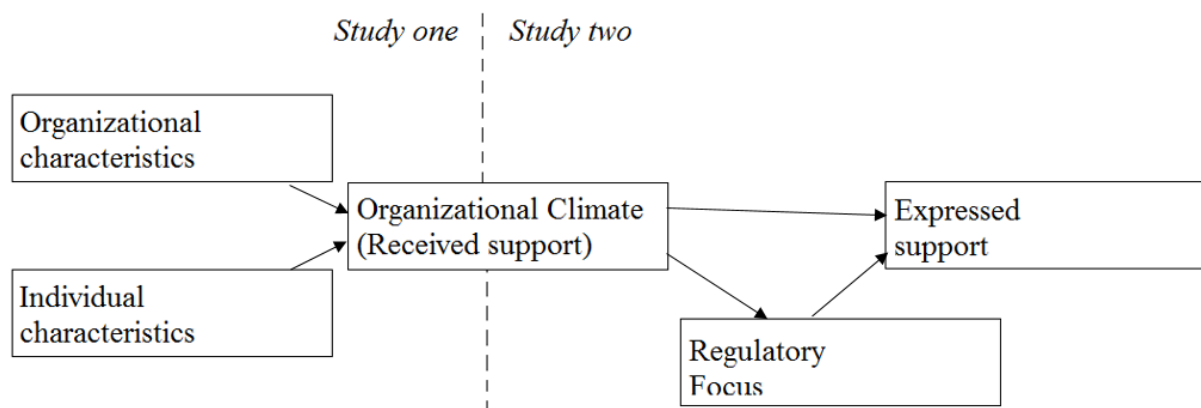

Figure 1. Visual representation of the present research.

STUDY ONE

This study is aimed to investigate individual and organizational characteristics that influence individuals in their perception of the *climate for creativity*. Characteristics of both individuals and organizations have been found to be of influence for employees' perception of the organizational climate (Dickson, Resick, & Hanges, 2006; González-Romá, Peiró, & Tordera, 2002; Lauer, & Scott, 2001; Sousa, & Coelho, 2009). As explained above, these perceptions are commonly aggregated in climate research, to monitor the organizational climate, assuming a *shared perception*. To investigate this shared perception among employees, Study 1 will be focused upon the characteristics that are of influence for ones' perception of the climate for creativity. The question that will be answered is: *to what extent can one's assessment of the organizational climate for creativity can be explained by characteristics of the organization, and to what extent by individual characteristics?*

The individual characteristics that will be included are gender, age, educational attainment, time in the current organization and time in their current positions. These characteristics were included because they previously either were linked to the perception of the molar organizational climate, or have been found to have an effect on the creative performance of employees (Rhoades, & Eisenberger, 2002; De Jong, 2005). However, some of the proposed effects supposedly are indirect effects, mediated by job characteristics (e.g. autonomy or control) or function of the employee. For example, a higher education is expected to lead to more autonomy, which in turn causes a more positive perception of the climate for creativity (Carr, Schmidt, Ford, & DeShon, 2003). However, the data was limited to the included individual characteristics, thus the assumed impact of job characteristics could not be addressed in current research. The organizational characteristics will be organizational size and industry. These are expected to be characterizing of the considered organizations (Kalleberg, & Van Buren, 1996; De Jong, 2003), thus were included. However, the inclusion of additional organizational characteristics was not possible due to the used method of online data collection. Hence, possible effects of for example reward structure on the climate for creativity cannot be addressed either.

Possible contributions of this study lie in explaining the climate for creativity within a multilevel framework. As Anderson, De Dreu, and Nijstad (2004) argue in a large meta-review of innovation research, typical studies into innovation have been limited to only a single level of analysis, as opposed to the knowledge that innovation processes will span at least two levels of analysis. Also more recently, this problem within the field of innovation has been acknowledged by Sears and Baba (2011). Similar claims were made by Hunter, Bedell and Mumford (2007), for the field of creativity, pointing at 'the need for studies examining cross-level and multilevel influences on creative climate […]' (p. 87).

Climate for creativity

Ekvalls' nine dimensional model is used to measure ones' assessment of the climate for creativity (Isaksen, Lauer, Ekvall, Britz, 2001). This model is an example in the field of organizational climates that presents the *referent-shift consensus* model. Although asking perceptions of employees, all items are formulated referring to organizational attributes. As explained, the nine dimensions in the model are (a) challenge and involvement, (b) freedom, (c) trust and openness, (d) idea-time, (e) playfulness and humor, (f) conflict, (g) idea-support, (h) debate, and (i) risk taking. In this study, the measures of these nine dimensions, will function as dependent variables – dependent of individual and organizational characteristics. The hypotheses formulated below, will be tested for all nine dimensions. Hence, a hypothesis which expects a positive effect for organizational climate, therefore implicitly expect a higher score for all dimensions. One exception is conflict, which is conceptualized as detrimental to the climate for creativity.

Using this nine-dimensional model, Study 1 is verging on both theoretical paradigms that were distinguished before; the *shared perception* and *cognitive schema* approach (Anderson, & West, 1998). The included individual characteristics assume employees' individual sense-making of the direct work environment, which follows the cognitive schema approach. As Schneider, Ehrhart, and Macey (2013) argue, it is unlikely that people in an organization have the same experiences, and subsequently value the climate for creativity similarly, thus will differ in their perceptions. On the other hand, the organizational characteristics emphasize the agreement among employees regarding the organizational climate that is constituted, assuming the climate for creativity to be an organizational attribute. These assumptions follow the *shared perception* approach. The more support that is found for the individual characteristics thus underlines the cognitive schema, whereas support for organizational characteristics underlines the shared perception approach. Since Anderson and West (1998) argue these two paradigms to be compatible with each other, both are used explaining employees' assessment of the climate for creativity.

Individual characteristics

The individual characteristics that are expected to explain a part of the perception of the climate for creativity, are the demographic attributes age, gender, and educational attainment. Also the time employees spent in the organization and in their current position are expected to explain some part of the perception. It should be noted, that hardly any research was found considering the specific climate for creativity. Hence, most expectations are derived from research in comparable scientific fields, for example the molar organizational climate or organizational support.

Regarding *gender*, a complex interplay between occupational segregation and working patterns is argued to influence the part both genders play in the employed workforces (Watson, 2012). Differences in working patterns are reflected in the percentage of men and women obtaining part-time jobs; in 2010, American women were nearly twice as likely as men to work part-time. 26.6 percent of

women worked part-time, compared to 13.4 percent of men (U.S. Department of Labor, 2011). In the European Union, in 2009, this gap was even larger (Sandor, 2009). 8.3 percent of European men worked part-time, and women were nearly four times as likely to work part-time; 32.0 percent of the working European women worked part-time. Especially these working patterns (e.g. weekly hours, flexibility) are expected to cause an indirect effect of gender on the perception men and women have regarding the climate for creativity.

More direct effects of gender on the assessment of the climate for creativity are provided by Amason and Allen (1993), who suggest that women indicate less perceived organizational support. This concept involves employees' 'global perceptions regarding the extent to which their organization values their contribution, cares about their well-being and is fair in noticing and rewarding extra effort' (p. 956). Eisenberger, Fasolo and Davis-LaMastro (1990) linked perceived organizational support to employee innovations and prosocial behaviors. This could indicate that women tend to show less employee innovations and prosocial behaviors. The findings regarding organizational support are in line with findings that suggest that female managers feel more controlled than male managers, thus perceiving a less favorably climate for creativity (Kwasniewska, & Necka, 2004). Moreover, Kwasniewska and Necka suggest that women tend to experience more problems at work, such as discrimination and lower wages, which cause women to perceive a less stimulating climate for creativity. Since women feel more controlled and less supported by the organization, it is expected that women will perceive the climate for creativity more negative than men. Following these findings, Hypothesis A1 is formulated as follows:

Hyp A1   Men will perceive a more positive climate for creativity than women.

Regarding the second individual characteristic, expectations are double-sided. Intuitively, both younger and older employees may be in advantage, due to differences in for example ageing, experience, life stage and career stage. Young and enthusiastic employees, compared to old and experienced employees – both might perceive a more positive climate for creativity. Both sides are seemingly supported by previous findings, mostly researching work attitudes and values (Cennamo, Gardner, 2008; Twenge, 2010; Parry, & Urwin, 2011). Therefore, I will refrain from formulating a hypothesis that proposes a direction of the expected effect. Rather, age will be included with an exploratory function. On the one hand, younger employees are argued to be more flexible and adaptable in terms of technological skills (Cennamo, Gardner, 2008), and Runco (2007) recalls that most older adults become less flexible in their thinking, following routines increasingly. Younger employees placed more importance on status and freedom work values, when compared to older employees (Cennamo, Gardner, 2008). On the other hand, older employees have been found to enjoy their responsibility more (Twenge, 2010).

In short, both sides of the argument may be supported. Therefore, it is expected to either find no effects of age at all since both sides will equal each other out, or find varying effects on different

dimensions, which is deemed more likely. However, it is important to be aware that the indicator 'age' is used, but that effects of age are hard to distinguish from effects of 'generation'. Arguing more flexibility because of the technical abilities of young employees regards a difference between generations, whereas less flexible thinking among older employees is a direct effect of age.

The expected effect of *educational attainment* is a particular example of the expected indirect effects of job characteristics. Firstly, over the last decades, knowledge-intensive services gained more importance (De Jong, 2005). The people working in knowledge intensive jobs, are in general higher educated than people working in manufacturing sectors. Knowledge-intensive jobs are found to have a higher autonomy for the employees, an important part of the climate for creativity. Therefore, it is expected that the higher ones' education, the better the climate for creativity will be perceived. Secondly, higher educated people will fulfill more complex tasks that lower educated people. As complex tasks require more creativity (Simonton, 1975), it is expected that higher educated people will perceive a more positive climate for creativity. A more direct effect is ascribed to theories of creativity, which show strong correlations between IQ and creativity (Kim, 2005). It is worth noticing that creativity has recently been included as a component of most modern theories of intelligence. Taken together, it is expected that the more creative people will be higher educated, and in turn will perceive a more positive climate for creativity, due to the type and complexity of their jobs. Accordingly, the second hypothesis is formulated as follows:

> *Hyp A2*   *The higher ones' educational attainment, the more positive the climate*
> *for creativity will be perceived.*

At last, *time in the organization* and *current position* are expected to influence ones' perceptions. It is expected that the more time one spent in both the organization and in their current position, the better the climate for creativity will be perceived, for two reasons. Firstly, it is widely supported in research that dissatisfied employees are more likely than others to quit the job (Hom, & Kinicki, 2001; Singh, & Loncar, 2010). The longer tenured employees are therefore expected to have a more favorable view towards the organization. Rhoades and Eisenberger (2002), found support for this mechanism when considering organizational support in a large meta-analysis that consisted of more than seventy studies. As explained before, the perceived organizational support is assumed to be analogue to the perceived organizational climate. Therefore a positive effect is expected of tenure in the organization and current position.

Moreover, an indirect effect of function is expected to play a role; the more time one spent in the organization, the more likely one is to have a managerial function (Kwasniewska, & Necka, 2004). As Kwasniewska and Necka found, managers' perceptions of the climate for creativity were more positive. Managers felt freer to communicate, more resourceful and felt less restricted by overcontrol.

Both proposed effects suggest that the longer an individual is working in the same environment, the more positive he or she will perceive the climate for creativity.

Hyp A3   The longer (A) one works at the current organization and (B) one works in their current position, the more positive the climate for creativity will be perceived.

Organizational characteristics

The organizational characteristics that are expected to explain a part of the perception of the climate for creativity, are organizational size and the industry an organization is operating in. In this paragraph, previous findings will be discussed, followed by expectations regarding the climate for creativity. Also for the organizational characteristics, to my knowledge no previous research was conducted explaining the specific climate for creativiy. Similar to the individual characteristics were most hypotheses derived from fields touching on the climate for creativity (innovation, organizational support). This holds for both the organizational size and industry.

Increased *organizational size* is expected to be of influence for the climate for creativity in two processes; experienced autonomy and the contributions one makes to the process. The former, autonomy, is expected to decrease when the organizational size increases; a negative effect. Kalleberg and Van Buren (1996) found support for these expectations. In their research, organizational size was found to have a negative effect for employees' job control and autonomy. This research was done on the large National Organizations Survey that was conducted as part of the American General Social Survey in 1991, thus serves a broad scope of organizations. But also more recently, larger organizations were associated with less autonomy for employees (Rhoades, & Eisenberger, 2002). De Jong (2005) suggests that the amount of job control and autonomy one receives at his or her job, is of influence for the individual innovation behavior; increased autonomy was found to be related to more individual innovation behavior. This means that more autonomous employees show higher levels of innovation efforts. Subsequently, De Jong found this individual innovation behavior to be an indicator for the assessment of the climate for creativity (De Jong, 2005). Therefore, it is expected that the smaller the organization, the better the climate for creativity will be perceived – an effect supposedly mediated by autonomy.

Besides the process of autonomy, Kalleberg and Van Buren (1996) described that the larger an organization, the less significance the contribution of an employee has for the survival of the organization. This touches on recent findings that increased organizational size is associated with more differentiation of operations and an increased bureaucratic complexity (Vaccaro, Jansen, Van Den Bosch, Volberda, 2012). The more differentiation, the less complex tasks become. The more complexity a task involves, the more creativity to fulfill the task is required. Hence, it is expected that the smaller, less significant, ones' tasks are within the entire organization, the lower the climate for creativity will

be perceived. No directly linked previous research was found, but based on these presumed indirect effects, Hypothesis 4 was formulated as follows:

Hyp A4   *The larger the organization, the less positive the climate for creativity will be perceived.*

Similarly, no previous research was found that considered differences between industries with regards to the climate for creativity, nor considering the molar organizational climate. Therefore, industry is included to serve an exploratory goal; the argument below leads to the expectation that differences between industries will exist, but that no direction can be formulated. Different industries appear to enhance different meanings to innovation, as argued in research by O'Shea and Buckley (2007), thus can have very distinctive understandings regarding the process and implications of the concept creativity. O'Shea and Buckley use a Marketing, Science and Technological-Economic paradigm as examples of different conceptualizations of innovation. For technical disciplines, innovation might be linked to the emergence of new products, totally different from a marketing perspective in which innovation might help dealing with the competition experienced. Dickson, Resick and Hanges (2006), argue that people describe themselves and their organizations against a backdrop of other people of other organizations within their frame of reference. Different industries will lead to different frames of reference – therefore, it is expected that differences will be found when comparing industries.

Secondly, the industry an organization is operating in might indirectly influence the climate for creativity. Sectors will differ in the type of work done, but also in other characteristics, for example the gender ratio in an organization. A more masculine sector will enhance different values than a feminine sector, such as healthcare or education. Furthermore, it is stated that depending on industries and product markets the level of creativity required may vary; supposedly influencing the focus on support for creativity (Wu, McMullen, Neubert, Yi, 2008). Apart from expressing the expectation that differences will be found when comparing industries, no hypothesis will be formulated since no direction can be derived from this argument.

Type of industry and organizational size are expected to be two characteristics of organizations that play a role in establishing the organizational climate for creativity. Below, in Figure 2, are all above explained hypotheses summarized into a single model. For age and industry no direction is shown, since these both are included in current research to serve an exploratory goal. In formulating these hypotheses, no differentiation has been made between the nine dimensions; all formulated hypotheses hold for all nine dimensions.
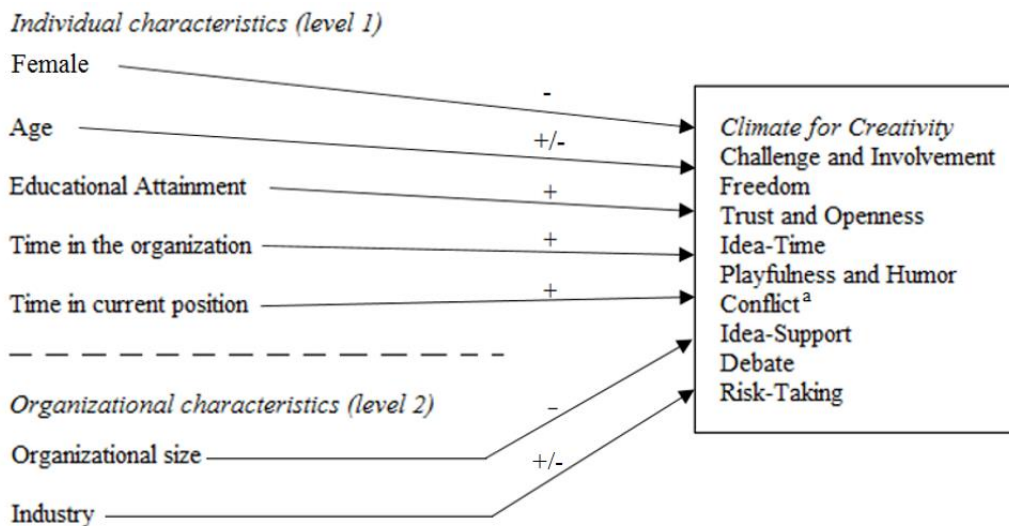
Figure 2. Proposed effects of individual and organizational characteristics. [a] *conflict* is formulated reversed.

METHOD

In testing these expectations, data will be used that is collected by the Creative Problem Solving Group (CPSB), between 2008 and 2011. CPSB is a company that describes itself as 'an international professional services firm, specialized in services based on practical innovation, creativity research and real-life application' (www.cpsb.com). In doing so, they exploit the SOQ among clients. Although this company is commercial, they maintain tight bonds to the scientific community. The company states that one of the unique aspects of their organization is the extensive international network of researchers that collaborates with CPSB. For example, Scott Isaksen, the current president, is a former professor of the Center for Studies in Creativity at Buffalo State College.

The SOQ is also included in meta-analyses of instruments assessing the climate for creativity, which revealed the scientific support for the SOQ (Hunter, Bedell, & Mumford, 2007; Mathisen, & Einarsen, 2004). The reviews these meta-analyses provided when comparing the SOQ with other instruments, were mostly positive – all dimensions were supported by literature and other research, and the SOQ was praised for its' value and accessibility for practitioners. Main critique was based on the development of the items; this process has been named unclear by Mathisen and Einarsen (2004), since no information is provided on which 'aspects of the questionnaire are based on prior research findings and which aspects are derived from theory' (p. 125). Thus, although the instrument was provided by a commercial company, sufficient scientific support has been shown for this data. This chapter will present the operationalization of the concepts of the organizational and individual characteristics, as

well as the dimensions measuring the climate for creativity. Regarding the dimensions conceptualizing the climate for creativity, also scale construction and reliability will be discussed.

Procedure and Sample

CPSB used the SOQ to capture the organizational climate. In doing so, a 'convenience sample' was taken in the organizations – this means observations were not gathered at random in the organization, but rather depended on which people could easily be reached. Therefore, this sampling method will most likely have consequences for the generalizability of the findings. The participants of the organizations were asked to fill out an online survey, using CPSB's interface. Including the individual characteristics and the SOQ, the total survey contained 63 questions, that were distributed over three parts. The survey had to be completed within 35 minutes.

The initial sample as provided by CPSB consisted of 8855 respondents. These respondents were provided by clients of CPSB. These clients asked CPSB to advise them in developing a strategy or how to promote organizational change. This sample of organizations is therefore not at random, a shortcoming of these data. A total number of 104 organizations was included in the sample, together accounting for 8417 respondents. Of 438 respondents the organization was unknown, and these respondents thus could not be included in the analysis. Among the 104 organizations included, the average sample size was 81 respondents per organization (SD = 212.68; min = 3; max = 1985). It should be noted, however, that the organization that contributed 1985 observations to the dataset, was of great influence for this distribution; the second-largest number of respondents within an organization was 532. Not taking this large contributor into account, a mean of 62 respondents per organization was found with a more reasonable standard deviation (SD = 98.94; min = 3; max = 532).

Regarding the organizations, only the name of the organization was provided in the data. To be able to take organizational characteristics (size and industry) into account, I had to search for these details online. Using online search engines and www.LinkedIn.com, information on the organizational characteristics was collected. Organizational size was found for 41 organizations (39.4%) that accounted for 6328 respondents (75.2%). Regarding the industry of the organizations, information was found for 47 organizations (45%) that together accounted for 6703 respondents (79.6 %). Taking both industry and organizational size into account, 40 organizations remained of which size and industry are known, accounting for 6278 respondents.

Taking this selection into account, also on the individual characteristics a considerable number of respondents showed missing values. Since age, gender, educational attainment, years of employment in their current organization and their current position were not required to fill out, many respondents retained from providing personal information. Especially gender and age resulted in a large number of missing data; 38.2 per cent of the respondents did not reply their gender (3882 valid cases). A similar image is found regarding the age of the respondents, a missing rate of 38.9 per cent, resulting in 3837 valid answers. For educational attainment, time in the organization and time in their current position,

less observations were left out: educational attainment showed no missing observations, time at the organization 5698 valid cases, and time in their current position 5075 valid cases. Taken together, of 2669 cases all needed information was known.

Taking these rates into account, a loss of 69.9 per cent of the initial number of cases is the result. The causes of this loss were closer looked at, to examine whether the cases that were missing could be assumed to be missing at random, which is a prerequisite to possibly perform multiple imputation. The first loss of respondents took place on the organizational level, due to missing data on *size* and *industry*. The method of linking these details to the names of the organization that were provided causes that the missing data cannot be assumed to be missing at random. It is likely that larger organizations are overrepresented, since details of smaller organizations are more difficult to collect online. Therefore, it is most likely that smaller organizations lead to missing data. Furthermore, by no means the correctness of these details could be assessed. This also is at disadvantage for smaller organizations, since especially the information of smaller organizations was hard to verify, and was therefore more often assigned as missing. A consequence of the inclusion of many large firms, is that these companies are likely to have departments in different countries. Since no information is available regarding ones' country of residence, the dataset is likely to be representing a wide scope of countries, also a detriment for the generalizability of this research.

On the individual level, most cases were lost due to missing data on gender and age. Contrary to the reasons that were found on the organizational level, no substantive reasons can be indicated for the missing data on the individual level. Because the missing data cannot be assumed to be missing at random at the organizational level, it was decided not to perform multiple imputation to deal with these missings. The nested structure of the dataset also hampers an accurate imputation of the values. Furthermore, all variables in the dataset will be used in the analyses, leaving no variables to further underpin this procedure. Therefore, multiple imputation was not found suitable, thus the analyses will be performed on the respondents that validly answered all questions ($n = 2996$).

Measures and Operationalization

Independent variables

Age was operationalized by asking ones' age, in years, and has been used unchanged in the analyses. Gender has been operationalized as a dichotomous item *female* (0 = male, 1 = female). *Education* was asked in a categorized way; the respondents had to select the highest level of education completed, according to the American schooling system (Elementary to Doctorate). Subsequently, these categories have been calculated to the number of years completed. Finally, the individual characteristics *time in current organization* and *time in current position* were both operationalized by asking for years.

Regarding the organizational characteristics, *organizational size* was operationalized as the total number of employees employed by the organization, a similar operationalization to Kalleberg and Van Buren (1996). After examining the data, it was decided to convert organizational size to a

categorical variable, since this would illustrate the seemingly non-linear effect of size better. Four dichotomous categories were created; (a) less than 5.000 employees, (b) 5.000-29.999 employees, (c) 30.000 – 50.000 employees and (d) over 50.000 employees. Since 'less than 5.000 employees' still contains considerably large organizations, a category of 'less than 1.000 employees' was considered. However, after re-examining the data, this category did not explain beyond the other categories, thus was not included. 'Larger than 50.000 employees' will serve as the omitted category.

At last, *industry* was coded in a categorical variable, according to the International Standard Industrial Classification (ISIC) of all economic activities, fourth revision (unstats.un.org). All organizations were classified, and afterwards the five largest categories were selected: (a)manufacturing, (b) professional, scientific and technical activities, (c) social work, (d) electricity and gas, and (e) financial and insurance. The organizations that were classified in other categories, were pulled together in a sixth category 'other'. Organizations of which the industry was unknown, were not categorized. Since manufacturing contained the most respondents (3545; 52.9 % of categorized respondents), this category will serve as the omitted category.

Dependent variables

The 52 statement items of the SOQ were answered on a 4-point Likert scale, ranging from 0 ('not at all applicable') to 3 ('applicable to a high degree'). An example of an item in the *Challenge and Involvement* dimension is: 'Most people here enjoy contributing to the success of the organization'. A complete overview of the items is provided in Appendix A. The scaled items of the SOQ, are theoretically divided over the nine dimensions as proposed by Ekvall (1987, in: Isaksen, Lauer, Ekvall, Britz, 2001). The items of eight dimensions were coded in such manner that a higher score means a better climate for creativity. This holds for all dimensions, except for *conflict* – a higher score means more conflict, and works detrimental to the climate for creativity. The inclusion of an overall score was considered, but since the factor analysis that will be discussed below, showed that the dimensions all contributed to a different extent, it was decided not to include this overall scale. The items that loaded high on this general scale without exception represented the Challenge and Involvement dimension, using a general scale thus would not yield an accurate image.

To further validate the nine proposed dimensions of the Climate for Creativity an Exploratory Factor Analysis (EFA) was conducted on the sample ($n = 2669$). The 52 items that are part of the SOQ were included. The dimensions are expected to be related, but should also have a sufficient discriminant validity; each theoretical dimension should measure a different latent variable. Since the factors are expected to correlate, oblique rotation was allowed (Promax). Using the Kaiser Criterion (Castello, & Osborne, 2005), the EFA extracted nine factors with eigenvalues over 1.0 (no table provided). Taken together, 59.5 per cent of the variance was accounted for. These nine factors were in accordance with the proposed theoretical dimensions. However, based on this EFA, five items were dropped from further analysis. Two items did not have a factor loading over 0.3 on any of the factors, and three items were

so-called *crossloaders,* showing factor loadings over 0.3 for several factors. Castello and Osborne recommend to drop these crossloaders if other items show high loadings on the affected factor, as was the case for all three items. Therefore, statistical arguments supported the decision to drop these items. Besides these five items, one item that was expected to load high on Idea-Time (IT2), instead loaded .386 on Risk-Taking ("*People here can change time-lines to think about new ideas.*"). This item has not been dropped since the factor structure itself was not affected by it; loading on a different factor than theoretically expected are not substantial grounds to drop this items.

A second factor analysis was conducted on the 47 remaining items, in order to construct scales based on the factor scores. Since these weighted scores were used, the relative importance of the items is reflected in the score of a respondent on the scale. The factor loadings of this second EFA are presented in Table 2. The nine factors that were extracted before accounted for 60.7 per cent of the variance, showing a clean factor structure (no crossloaders, nor items that do not load on any factor). All items loaded over .3 on one factor, with just the above mentioned item (IT2) loading on a different dimension than expected. Overall, this result made that we adopted the scale construction based on the factor scores of this second EFA, using the regression method.

Table 2

Dimensions Situational Outlook Questionnaire, Factor loadings of a PAF analysis (Promax) (n = 2996).

Theoretic dimension	Factors								
	1	2	3	4	5	6	7	8	9
Challenge and Involvement									
CI1	.497								
CI2	.667								
CI3	.837								
CI5	.600								
CI6	.647								
CI7	.836								
Playfulness and Humor									
PH1		.788							
PH2		.562							
PH3		.890							
PH4		.647							
PH5		.880							
PH6		.550							
Conflict									
C1			-.668						
C2			-.726						
C3			-.757						
C4			-.647						
C5			-.648						
C6			-.613						
Idea-Time									
IT1				.317					
IT2							.334		
IT3				.791					
IT4				.918					
IT5				.767					
IT6				.864					

Table 2. *(continued)*

	1	2	3	4	5	6	7	8	9
Debate									
D1				.559					
D2				.778					
D3				.808					
D4				.683					
D5				.650					
Freedom									
F1					.700				
F2					.702				
F3					.615				
F4					.710				
F6					.553				
Risk-Taking									
RT1						.471			
RT2						.669			
RT3						.662			
RT4						.582			
RT5						.712			
Idea-Support									
IS1							.899		
IS2							.872		
IS3							.560		
IS4							.594		
IS5							.606		
Trust and Openness									
TO1								.718	
TO3								.560	
TO4								.308	
Eigenvalues	13.443	3.516	2.330	2.256	1.943	1.619	1.284	1.100	1.034
% variance accounted for	28.6	7.5	5.0	4.8	4.1	3.4	2.7	2.3	2.2

The zero-order correlations are presented below in Table 3, along with the Cronbach's Alpha for all scales. As shown, all scales show a high reliability (>.782), except the Trust and Openness scale. A Cronbach's Alpha of .649 is below the common threshold of .70 (Field, 2009). Since this scale could not be improved by removing one item, the scale was used unchanged. Finally, in order to improve the readability of these scores in the analyses, all scores have been multiplied by 100, as is common practice in usage of the SOQ.

Table 3
Zero-order correlations and Cronbach's Alpha scores for the nine dimensions of the SOQ (n = 2996).

Dimensions	1	2	3	4	5	6	7	8	9	α
Challenge and Involvement	.									.840
Playfulness and Humor	.575*	.								.873
Conflict	.538*	.483*	.							.822
Idea-Time	.429*	.501*	.316*	.						.840
Debate	.479*	.490*	.147*	.420*	.					.848
Freedom	.483*	.442*	.255*	.455*	.333*	.				.804
Risk-Taking	.643*	.567*	.282*	.648*	.635*	.622*	.			.782
Idea-Support	.698*	.719*	.605*	.662*	.619*	.488*	.755*	.		.871
Trust and Openness	.617*	.511*	.720*	.346*	.273*	.399*	.489*	.629*	.	.649

Note. * = p < .001

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The descriptive statistics of all study variables are reported (see Table 4). As explained, the dimensions of the climate for creativity are based on factor scores, resulting in a mean of zero. Furthermore, the organizational characteristics are reported on organizational level, thus considering the number of organizations ($n = 39$). Consequently, the number of organizations in the different categories was reported.

Table 4

Descriptive statistics of all used variables (Study 1).

Variable	Min	Max	Mean	SD
Dependent Variables [a]				
Dimensions Climate for Creativity[c]				
Challenge and Involvement	-412.90	148.95	0.000	94.061
Playfulness and Humor	-311.33	191.17	0.000	94.931
Conflict	-346.80	165.95	0.000	92.866
Idea-Time	-277.22	269.76	0.000	95.059
Debate	-313.60	211.48	0.000	93.101
Freedom	-317.42	223.44	0.000	90.908
Risk-Taking	-307.74	265.91	0.000	92.415
Idea Support	-347.68	208.64	0.000	95.252
Trust and Openness	-285.75	195.14	0.000	85.532
Level 1 [a]				
Female	0	1	.279	.449
Age	19	71	41.6	8.752
Educational attainment (yrs)	8	24	17.8	2.831
Time in current organization (yrs)	.25	25	10.1	7.852
Time in current position (yrs)	.25	15	2.7	2.338
Level 2 [b]				
Organizational size	30	305.000	135064	139701.66
< 5.000	0	1	17[d]	
5.000 – 29.999	0	1	11	
30.000 – 49.999	0	1	7	
> 50.000	0	1	4	
Industry				
Manufacturing	0	1	12[d]	
Professional, Scientific and Technical	0	1	7	
Human health and Social work	0	1	5	
Electricity, Gas	0	1	2	
Financial and insurance	0	1	6	
Other	0	1	7	

Note. [a] $n = 2996$ respondents, [b] $n = 39$ organizations, [c] factor scores, [d] number of organizations in the categories.

Analytical strategy

Because the data had a *nested* structure, that is, the individual respondents (Level 1) are employed within the organizations (Level 2), multilevel analysis was used to test the hypotheses. Performing a

traditional OLS regression on data with a nested structure would violate the independent error assumption because individuals within organizations do not operate independently. Since the multilevel modeling takes into account the non-independence of these structured data, this method is preferred to test these hypotheses. In this approach, a simple model is the random intercept model (De Jong, 2005). This model treats differences between organizations as 'a source of variance in the intercept of the regression equation' (p.100). Concrete this means that differences between groups exist, but effects of parameters are assumed to be fixed at the same estimate for each organization. A more complex model would be the random slope model. This model allows parameters to differ across organizations. If it would be hypothesized that the effect of age would differ as the size of the organization increases (moderation), a random slope model would be needed. Since this is not the case, random intercept models were used to test the hypotheses.

In order to assess the structure of the data, first *null* models will be estimated in the multilevel approach. In these models no predictors are specified for neither the Level 1 nor Level 2 independent variables, to test whether there is significant between-group variance in respondents' assessment of each of the dimensions of the climate for creativity. Based on these null models the Intraclass Correlation (ICC) can be estimated. This statistic provides information on the share of variance in a dependent variable that is caused by group membership. In other words, the ICC estimates the between-group variance, therefore, this statistic lends itself to examine whether data with a nested structure are calling for a multilevel approach (De Jong, 2005). A high ICC, combined with a significant F-value would warrant a multilevel approach. These F-values will be estimated thru a one-way Analysis of Variance (ANOVA). The ICC is accompanied by *Wald Z* tests for the residual and the intercept. Wald Z tests show the significance of the variability accounted for at both levels. Accordingly, a significant Wald Z test on the residual shows that a significant amount of variance is explained within-groups, and the Wald Z regarding the intercept indicates the significance of the variance explained between-groups (Peugh, & Enders, 2005). A significant Wald Z intercept test thus confirms that intercepts vary significant between organizations. Significant Wald Z tests in model 1 and 2 will suggest that after the inclusion of respectively Level 1 and Level 2 variables, there is still significant variability to be explained both within organizations (residual) and between organizations (intercept).

Furthermore, model fit to the data is reported thru the decrease of the deviance measure (Δdev). This is because R^2 can not be reported reliable since hierarchical multilevel regression uses maximum-likelihood estimates (Heck, Scott, & Tabata, 2013). The deviance measure uses a less-is-better structure, is tested against a X^2-distribution (De Jong, 2005), and is based on the number of parameters that was added to the model (Δdf) (Peugh, & Enders, 2005). The deviance measure is estimated by comparing successive models. An initial value of the deviance measure is given in the *null* model, a second in the Level 1 random intercept model, and a third in the random intercept model that includes both Level 1 and Level 2 parameters. Consequently, this Δdev was compared to a Chi-square distribution, using the

difference in number of parameters as the Δdf. A significant result would confirm an increase in explained variance accounted for after adding new parameters.

RESULTS

In this chapter, the step-by-step building of the random intercept models is examined, as well as the fit of these models to the data. This will be done separately for each dimension of the climate for creativity. All results are reported in Table 5 below. Looking at the ICC and F-value for the null-models, all dimensions show a substantial ICC, combined with a positive, significant F-value. The Wald Z intercept also indicates a significant contribution on the organizational level; all dimensions show a significant Wald Z intercept test ($p < .05$). These findings indicate that a sufficient part of the variance is explained on the organizational level, and warrants a multilevel approach. Most dimensions show an ICC that indicates that about 10 percent of the variance is explained on the organizational level. One exception is the fifth dimension, Debate. For Debate, just 3.8 percent of the variance is explained on the organizational level, suggesting a larger heterogeneity within organizations. For Debate, most variance is explained on the individual level when compared to the other dimensions. The highest percentages variance explained due to group membership are found in Challenge and Involvement, and Idea-Support. For these dimensions, respectively 13.4 and 12.6 percent of the variance is explained on the organizational level.

Regarding the fit of these models to the data, the deviance was considered. This lead to the conclusion that for six dimensions a model that included just the Level 1 predictors, fitted the data better than the *null* model. Six dimensions (Challenge and Involvement, Conflict, Idea-Time, Debate, Freedom, and Trust and Openness) did show an improved fit, the other three did not. For all nine dimensions, the model that included all Level 1 and Level 2 predictors did not fit the data better than the Level 1 model, this suggests that the Level 2 predictors *size* and *industry* do not explain beyond the included Level 1 predictors. The Wald Z intercept endorses this image; for eight dimensions, the Wald Z intercept still shows significant contribution of the organizational level in Model 2. The inclusion of all independent variables thus still leaves variance to be explained on the organizational level. Debate is the only exception, the low ICC is reflected in the non-significance of the Wald Z intercept in Model 2 (Wald Z = 1.636, $p = .102$). The Wald Z residual shows consistent significance, also after inclusion of all predictor variables a significant amount of variance is explained beyond these on the individual level. To summarize these statistics it can be said that a large part of the variance is explained at the individual level, according to the ICC. However, the Wald Z tests indicate that a significant part of the variance remains to be explained on the organizational level. As the deviance indicates however, the included Level 2 predictors do not add much to this explanation. The only exception to these findings is Debate, which shows less variance to be explained on the organizational level.

Table 5. *Summary of Multilevel analysis of Level 1 and Level 2 indicators on the nine dimensions of the climate for creativity (n = 2669).*

Dimensions	**CI**			**PH**			**C**			**IT**		
	Null	1	2	*Null*	1	2	*Null*	1	2	*Null*	1	2
Intercept	-6.47	-94.13***	-90.34***	2.38	11.25	2.90	4.37	-23.90	-29.60	5.41	-4.37	-8.01
Level 1												
Female		-1.60	-2.01		-4.98	-5.36		.04	-.14		-16.16***	-16.43***
Age		1.33***	1.29***		-.69**	-.74**		.83**	.79**		.22	.21
Educational attainment (yrs)		1.41*	1.29		1.06	1.06		-.20	-.25		.49	.55
Time in current organization (yrs)		.78**	.81**		.03	.07		.04	.06		-.06	-.04
Time in current position (yrs)		.11	.15		.95	.95		-1.10	-1.07		-.81	-.81
Level 2												
Organizational size[a]												
< 5.000			-4.30			23.65			4.23			12.24
5.000 – 29.999			-18.28			10.29			-12.25			-3.25
30.000 – 49.999			4.68			5.63			-.41			-1.27
Industry[a]												
Professional, Scientific, Technical			-7.04			-24.81			11.24			-22.73
Human health and Social work			55.51*			24.61			40.80			6.93
Electricity, Gas			13.90			-8.64			8.29			16.84
Financial and insurance			-8.05			-6.18			3.59*			2.32
Other			18.30			.28			24.03			13.29
ICC (*null model*)	.134			.100			.098			.103		
F (*null model*)	8.810***			4.930***			4.971***			5.023***		
Wald Z Residual	36.29***	36.29***	36.29***	36.26***	36.26***	36.23***	36.28***	36.27***	36.25***	36.28***	36.28	36.27***
Wald Z Intercept	3.44**	3.39**	3.23**	3.02**	2.94**	2.60**	3.08***	3.09**	2.76**	3.14**	3.14**	2.95**
Model fit:												
Deviance	31608.42	31536.49	31528.02	31791.97	31780.97	31775.80	31669.64	31655.57	31650.02	31793.73	31776.79	31773.23
Δ Deviance		71.93	8.47		11.00	5.17		14.07	5.55		16.94	3.56
Δ DF		5	8		5	8		5	8		5	8
Significance		**						*			**	

Note. [a] *>50.000 employees* and *manufacturing* are the omitted categories. *p < .05. **p <.01. ***p<0.001

Table 5 (Continued). *Summary of Multilevel analysis of Level 1 and Level 2 indicators on the nine dimensions of the climate for creativity (n = 2996).*

Dimensions

	D			R			F			IS			TO		
	Null	1	2	*Null*	1	2	*Null*	1	2	*Null*	1	2	*Null*	1	2
Intercept	-2.28	-29.10	-29.06	-11.53*	-19.54	-28.42	-11.96	-41.83**	-40.79	.91	-15.82	-19.18	-5.17	-41.99**	-31.97
Level 1															
Female		-11.44**	-12.48**		6.24	6.39		-8.01	-8.18*		-8.34	-8.54		-11.21**	-11.39**
Age		-.33	-.39		-.21	-.19		-.01	-.03		.33	.31		.65**	.62**
Educational attainment (yrs)		2.14**	2.14**		.53	.63		1.45*	1.48*		.28	.29		.89	.80
Time in current organization (yrs)		.63*	.64*		.36	.36		.58*	.59*		.20	.22		.02	.05
Time in current position (yrs)		.26	.23		.65	.65		.53	.54		-.48	-.47		-.96	-.93
Level 2															
Organizational size															
< 5.000			4.27			24.54			7.65			11.42			-10.46
5.000 – 29.999			7.26			3.41			-19.42			-3.09			-21.72
30.000 – 49.999			-.73			19.42			-.87			4.23			-2.35
Industry															
Professional, Scientific, Technical			-4.94			-16.66			-8.33			-16.84			2.30
Human health and Social work			14.74			-15.13			20.83			15.84			30.22
Electricity, Gas			4.68			8.41			28.65			16.64			-5.67
Financial and insurance			2.78			-14.75			-1.77			-1.44			-4.18
Other			-21.21			-16.31			2.03			1.42			13.03
ICC (*null model*)	.038			.099			.116			.126			.098		
F (*null model*)	2.817***			5.140***			8.383***			5.833***			6.822***		
Wald Z Residual	36.38***	36.32***	36.27***	36.27***	36.27***	36.28***	36.27***	36.26***	36.26***	36.25***	36.25***	36.24***	36.28***	36.27***	36.25***
Wald Z Intercept	2.57*	2.21*	1.64	3.03**	3.00**	3.09**	3.17**	3.09**	2.99**	3.14**	3.14**	3.02**	3.13***	3.02**	2.70**
Model fit:															
Deviance	31738.45	31716.96	31711.47	31549.12	31543.02	31539.53	31533.24	31517.11	31513.93	31785.89	31777.50	31775.86	31164.09	31139.52	31134.11
Δ Deviance		21.49	5.49		6.10	3.49		16.13	3.18		8.39	1.64		24.57	5.41
Δ DF		5	8		5	8		5	8		5	8		5	8
Significance		**						**						**	

Note. >50.000 employees and *manufacturing* are the omitted categories. *n* = 2669. *p < .05. **p <.01. ***p<0.001

Individual differences

After examining the null models, all Level 1 parameters were added to the model. As explained, this inclusion did not mean a better fit for all dimensions. The first hypothesis predicted a negative effect for being female. Seven dimensions, all except Risk-Taking and Conflict, indeed showed a negative effect, though not all significant. The dimensions that were found to experience a significant effect of gender, were Idea-Time, Debate and Trust and Openness. For these dimensions, Hypothesis A1 is supported. This means that women in organizations tend to perceive a less supporting climate for creativity compared to men, when considering these dimensions.

Regarding age, no hypothesis was formulated since previous findings on the direction of this effect seemed ambiguous. This ambiguous effect of age was supported; both negative and positive effects were found. The older an employee, the more Challenge and Involvement is perceived, along with more Trust and Openness. This indicates a better climate for creativity for older employees. However, less Playfulness and Humor was perceived, and more Conflict, two effects that are assumed to be detrimental to the climate for creativity. Therefore, both the 'young and enthusiastic' and 'old and experienced' side of the argument find support in the data.

Hypothesis A2, suggesting a positive effect for educational attainment on the climate for creativity, was also partially confirmed. The effect of educational attainment was found in the predicted direction for all dimensions. However, only on Challenge and Involvement, Debate, and Freedom this effect was significant. For these dimensions, educational attainment is a positive correlate for the climate for creativity. Therefore, Hypothesis A2 was partially supported; the higher the educational attainment of an employee, the more Challenge and Involvement, Debate and Freedom this employee indicates. Time in the current organization and in the current position were administered in the fifth hypothesis. None of the dimensions showed an effect of time in their current position, therefore

Hypothesis A3b, predicting a positive effect of the time one is employed in his or her current position, was not supported by the data. Of slightly more importance seemed the time one worked in the current organization. Positive effects of time in the current organization were found for three dimensions; Challenge and Involvement, Debate and Freedom. On these dimensions, employees that are longer tenured in the organization perceived the organizational climate as more supporting. Hypothesis A3a thus was partially supported.

These effects, of all individual characteristics, did not diminish once the Level 2 parameters were added in the second model. Only the positive effect of educational attainment on Challenge and Involvement dropped out of significance. The persistence suggests that organizational size and industry do not interfere with the effects that were found for the individual characteristics.

Organizational differences

With regard to organizational differences, a negative effect was suggested for organizational size (Hypothesis A3), and the industry an organization is operating was added to serve an exploratory goal (Hypothesis A4). Using the largest organizations (> 50.000 employees) as reference category, the Level 2 models in Table 5 show no support for the hypothesized effect of organizational size. Considering the directions of the effect of the categories of size, no linear relation can be derived, nor any direct effect of the categories. Therefore, it can not be concluded that organizational size plays a role in explaining the perceptions of the organizational climate. As for the industry, manufacturing was used as the reference category, since most organizations were included in this category. Only negligible effects were found for the industries; Human Health and Social work yields a positive effect on perceptions of Challenge and Involvement, and Financial and Insurance organizations had a positive effect on perceptions of Conflict. The exploration of industry as an explanation for employees' perception of the climate for creativity, thus hardly yielded results.

CONCLUSION and DISCUSSION

While studies regarding employees' perceptions of a global organizational climate have received a great deal of attention in the social sciences, this is not the case for the more specific *climate for creativity*. By explaining the climate for creativity within a multilevel framework, a more in-depth explanation of the perceptions was pursued. By including individual and organizational characteristics to explain employees' perceptions of the organizational climate for creativity, this study aimed to indicate characteristics that influence ones' perception of the climate for creativity. Individual characteristics included were gender, age, educational attainment, time in the organization and current position, as well as the organizational characteristics size and industry. The distinction between individual and organizational characteristics is important since most research considering the climate for creativity aggregates employees' perception to a single measure of the organizational climate (Schneider, Ehrhart, & Macey, 2013; LeBreton, & Senter, 2008). To justify the aggregation of individual perceptions, a *shared perception* among employees is often assumed, in other words; agreement among employees (Isaksen, & Akkermans, 2011; Anderson, & West, 1998). The opposing view is the *cognitive schema approach,* which assumes individual differences in perceptions. Based on both perspectives, it was expected to find explanations both within individual and organizational characteristics. In this final chapter, first general conclusions will be drawn from the analyses. Subsequently it will be discussed whether these conclusions hold for all nine dimensions, and what these finding imply for the theoretical grounds of this research. Based on these conclusions and theoretical implications, practical implications

will be discussed. At last limitations of this research are indicated and directions for further research are proposed.

The empirical evidence in this research shows that organizational characteristics seem to play a limited role in explaining differences between individual employees. Little variance was explained on the organizational level, which was also illustrated by non-significant effects of the organizational characteristics. Rather, individual differences played an important role, as was reflected in the effects found for these individual characteristics. This indicates that perceptions of employees regarding the climate for creativity in this research are largely explained by individual characteristics, rather than organizational characteristics, which provides a general answer to the research question. These findings thus contradict the *shared perceptions* approach, and rather support the *cognitive schema approach.* Employees seem to constitute their own reality of the climate for creativity, and the shared perception among employees within an organization seems limited. It should be noted though, that for all dimensions but Debate a significant part of the variance remains to be explained on the organizational level, which was not explained by the included organizational characteristics.

These general findings are globally shared among the dimensions of the climate for creativity, but a closer look suggests differences among the dimensions. The dimension that shows the highest percentage explained variance at the organizational level, Challenge and Involvement, shows more than three times as much agreement among employees than Debate, the dimension that shows the lowest agreement among employees within organizations. Despite this difference, both Debate and Challenge and Involvement show strong effects of the individual characteristics. This supports the findings that also for Challenge and Involvement, the major part of the variance remains to be explained at the individual level. Secondly, for Playfulness and Humor, Risk-Taking and Idea-Support, the model fit to the data was not improved after inclusion of the individual characteristics. Risk-Taking and Idea-Support do not show a significant effect from any of the included individual characteristics, and also show the lowest, non-significant improvement of the model fit. The evidence in this research thus shows that the influence of individual and organizational characteristics varies when comparing different dimensions. These differences indicate that some dimensions generate a stronger shared perception than other dimensions. Debate is an example of a dimension that is not shared among employees, but is rather explained by the individual sense-making of the environment. Idea-Support represents the other side of the argument; a relatively large part is explained by a shared perception, and the inclusion of the individual characteristics does not yield any significant findings. These two dimensions thus supposedly represent the *cognitive schema* and the *shared perceptions* approach. To further illustrate these differences, the included characteristics will be discussed separately.

Gender differences were found in Trust and Openness, Debate and Idea-Time, all at disadvantage for women, who perceive less trust and openness, debate and idea-time compared to men. These findings provide support for the previous findings of Amason and Allen (1993), and Kwasniewska and Necka (2004) that predicted women to perceive a more negative climate for creativity

when compared to men. For the other six dimensions, no support was found for this hypothesis. Regarding the influence of *age*, this research took an exploratory stand; I refrained from formulating a hypothesis. Both a negative and a positive effect of age were confirmed by the results of age on employees' perceptions, thus the effect of age yields opposing conclusions. Two dimensions supported the view that the climate for creativity is perceived more positive by older employees; Challenge and Involvement and Trust and Openness. However, older employees also perceive more Conflict and less Playfulness and Humor. The influence of age on the perceptions thus remains a two-sided sword; both the 'young and enthusiastic' and 'old and experienced' side of the argument finds support.

Educational attainment was expected to positively influence the perceptions. Education on many dimensions only showed weak effects, although highly educated people do perceive more Debate and Freedom. Especially the higher score on Freedom suggests verification for De Jong's (2005) findings that higher educated people will work in jobs that are found to have a higher autonomy. This supposedly is an indirect effect; educational attainment supposedly influences job characteristics, which in turn could have a positive effect on the experienced freedom. This means that to further verify this conclusion, job characteristics should have been included in the analyses, and mediate the relationship between educational attainment and experienced freedom. Moreover, since seven dimensions do not show effects of educational attainment, no general confirmation of the effects of educational attainment can be yielded, thus the theories that link intelligence with creativity (Nusbaum, & Silvia, 2011; Kim, 2005), do not seem to play a role in current research. An alternative explanation of these results might be a more critical attitude, which is a common feature of highly educated people (Bradley, & Bradley, 2005), which might diminish effects. However, also the high mean educational attainment of 17 years and low standard deviation (2.8 years) might have caused a lack of results.

The last individual characteristics that were considered were the *length of employment* and the *time one spend in the current position*. In line with Rhoades and Eisenbergers' (2002) findings, longer tenured employees were showing a more positive perception of the climate for creativity. Yet, these findings only hold for Challenge and Involvement, Debate and Freedom. The other dimensions did not benefit from a longer time in the organization. This means that either longer tenured employees are employed in more supporting environments, or that that the principle works conversely. The people that are longer tenured, might be the ones who perceive the climate as more supporting because the people that do not perceive a positive climate for creativity leave the organization, as was argued by Rhoades and Eisenberger. Moreover, for none of the dimensions employees' perception was influenced by the time they spend in their current position. These findings indicate that the time one spends in a particular environment is of influence, but that this holds for the organization as a whole rather that the position one is working in.

Regarding the hypotheses considering effects of industry and organizational size, no empirical evidence was found in current research. None of the dimensions was more accurately explained after inclusion of industry and organizational size, indicating that these factors do not have an effect on ones'

assessment of the organizational climate for creativity. More specifically, a non-confirmation of the effect of *size* means that no support was found for suggestions of Kalleberg and Van Buren (1996) and Vaccaro et al. (2012), who suggested detrimental effects of the increasing complexity of larger organizations. Certainly, these detrimental effects of increasing size were not found for the climate for creativity. One reason to explain this lack of results might be an overrepresentation of large organizations that is caused by the online data collection of size and industry. This overrepresentation is caused by two means; details of smaller organizations are more difficult to collect online and secondly, the details of smaller organizations are harder to verify, thus more often assigned missing. Having large organizations overrepresented in the dataset, may have caused a lack of effects for organizational size on employees' perception.

This cause might lie in that organizations over a certain 'threshold size' might not experience effects from their organizational size. In other words; it is possible that 'large' organizations do not differ from 'extra-large' organizations. If, for example, only the smallest category would yield results, this would indicate such a threshold. Though this was not found in the data, this threshold might be discovered far below our smallest category of 'smaller than 5.000 employees'. For example De Jong (2007) argues that organizations of over 20 employees often include more formal procedures in an organization, and accordingly uses 20 as a threshold in his research for organizations to reach a higher level of complexity. In current research it might be said that almost all respondents are working in large organizations; only eight included organizations are smaller than 1000 employees, covering 8.1 percent of the respondents, and the mean organizational size was close to 30.000. This might be an explanation for the lack of results found for the number of employees.

Industry, the second organizational characteristic included in current research, was included to serve an exploratory goal. Only small effects were found of industry on employees' perception of the climate for creativity. Therefore, the inclusion did not yield support for the proposed theory that different industries will have different conceptualizations of creativity, and thus will perceive the climate for creativity different (O'Shea, & Buckley, 2007). O'Shea and Buckley explain that for example technical specialists may operate with different conceptualizations of innovation as opposed to marketing specialists, which leads to the expectation of differences regarding the perception of the climate for creativity among industries. A possible explanation for this absence of the expected effect may also lie in the overrepresentation of large organizations. A large organization is likely to have marketing, technical and economic departments included within the organization, which might induce the effect of different conceptualizations as proposed by O'Shea, & Buckley. This may have caused a lack of effects regarding the different industries.

Summarized, the general result that most variance is explained on the individual level was reflected in the partial confirmation of the hypotheses on the individual level. However, the part of the variance that lies on the organizational level, seemingly was not well reflected thru the organizational size and industry. Examination of possible effects of other organizational characteristics on the nine

dimensions of the climate for creativity is needed to further the understanding of the shared perception among employees. As explained before, this assumed shared perception is commonly used by researchers to justify the aggregation of the scores of individuals to assess the dimensions of the climate for creativity on the organizational level (Hunter, et al. 2007). The assumption that employees will adhere a same meaning to the environment is, as the empirical findings of current research show, neither explained by the organizational size, nor by industry. However, this lack of results does not yield conclusions about the appropriateness of an aggregation of individual perceptions based on the assumed shared perception. Minimum levels of agreement, or cut-off levels, are based on arbitrary criteria, and difficulties in attaining consensus regarding these criteria were experienced by researchers that adopted a shared perception approach (Anderson, & West, 1998; Schneider, Ehrhart, & Macey, 2013). According to González-Romá, Peiró, and Tordera (2002) and Schneider, Ehrhart, and Macey, *Climate Strength*, the degree of within-unit agreement among members' climate perceptions, is a different concept within the climate studies which is gaining more attention in assessing the justification of this shared perception. An assessment of the shared perception in data used in current project, might be more accurately yielded by investigating the climate strength of the included organizations.

In current research, the effort of measuring the correlates of the perception of the climate for creativity at both the individual and organizational level is constrained by at least four limitations, which also may represent fertile ground for further research. As explained, the data collection caused the overrepresentation of large organizations. Moreover, this method limited the inclusion of organizational characteristics to size and industry. This is not in line with previous research that found other organizational characteristics (e.g. reward systems) to be of major influence for the organizational climate (Schneider, et al., 2013; Isaksen, & Akkermans 2011). Also, the inclusion of individual characteristics was limited to available characteristics; research that found job characteristics (e.g. autonomy) to be of influence accordingly was not well-reflected by the inclusion of the current individual characteristics.

Besides the used method of data collection for the organizational characteristics, two limitations are identified in the bridge between the conceptualization and operationalization of the concepts in current research. First, following Dickson, Resick and Hanges (2006), current research sees the organizational climate as employees' sense-making of the context they are working in. An important part of this context has been found to be the unit or department, assuming that the direct environment of an individual constitutes a large part of the climate for creativity (Isaksen, & Akkermans, 2011; Schneider, et al., 2013). Since the data was restricted to the individual and organizational level, no information was known about the department that constituted the direct environment of an employee. Including the direct environment of an employee might yield higher agreement among employees.

A final limitation of current research might be argued to be the operationalization of the climate for creativity. Not different from other instruments, the SOQ measures for the greater part dimensions that support the climate for creativity. The only dimension that is operationalized to be detrimental to

the climate for creativity is Conflict. However, research considering dimensions that hamper creative outcomes (e.g. bureaucracy, centralization) were also found of great influence (Hirst, Van Knippenberg, Chen, & Sacramento, 2011; Liu, Liao, & Loi, 2012). Hirst, Van Knippenberg, Chen and Sacramento found that bureaucracy can suppress the expression of individual differences that may engender creativity. Including concepts that may stifle the organizations' climate for creativity, is expected to enhance the practical value of climate research.

The aim to further the understanding of employees' perception of the organizational climate for creativity has been reached partially, but current research also raised new questions. Both the confirmation of hypotheses and the lack of findings regarding other hypotheses indicate numerous opportunities to explore in future research. Main opportunity might lie in including different characteristics in multilevel analyses similar to the ones used. On the organizational level, leadership style or reward system (Andrioupoulos, 2001; Rhoades, & Eisenberger, 2002) might further explain differences in perceptions. On the individual level inclusion of job characteristics (e.g. autonomy) or psychological processes have been found to influence perceived support (Rhoades, & Eisenberger, 2002), and therefore might explain perceptions of the climate for creativity. Some hypotheses in current research were explained in more indirect effects via job characteristics, thus these characteristics are possible mediators in the effects that were found in current research. Gaining knowledge regarding these organizational and individual characteristics will improve the practical validation of research in this field. After all, an organization will hardly be able to change the age and gender of the work force, whereas autonomy or leadership style might be more manageable. Moreover, including a subdivision in departments in similar analyses would contribute to the knowledge in the field of the climate for creativity. Taking a level into account that verges on both the individual level and organizational level, might help further nuancing the importance of individual characteristics. More conceptual contributions to the field could be made by developing an interactionist perspective regarding the organizational climate. This could indicate a compromise between the shared perceptions approach and the cognitive schema approach. Such a theoretical perspective could shed new light on the emergence of employees' perceptions of the organizational climate. Current research indicates a call for a paradigm verging on both the shared perceptions and cognitive schema. In conclusion, current research finds partial support for the individual characteristics that explain employees' perception of the climate for creativity, and indicates possibilities for further research on both individual and organizational characteristics that form explanations for these perceptions.

STUDY TWO

Although the first study was aimed at furthering the understanding of the contribution of individual and organizational characteristics for ones' perception of the climate for creativity, the present study will change the respondents from a perceiver of support for creativity, to an active contributor for others in this support. In viewing the individual as an active agent, a deeper understanding of the paradoxical role of creativity is pursued. In short, the paradox points at the welcoming attitude to the *idea* of creativity, which is contradicted by the attitudes towards *attributes* of creativity. Thus, it is expected that people believe to foster creativity, but in reality are not welcoming traits that are connected to creativity. This comes to no surprise since some traits that are found characterizing of creative people are not always perceived constructive in a work context.

This paradox has been examined empirically often in classroom-settings. For instance, Westby and Dawson (1995) found that teachers have a negative view on personality traits associated with creativity, even though these teachers pointed out to value creativity - indicating a misconception of the meaning of creativity. Also, Beghetto (2007) hypothesized that novel ideas of children would often be dismissed in classroom discussions. Indeed, among prospective teachers, he found a preference for relevance over uniqueness in classroom discussions. These negative attitudes of teachers toward creative students is called a re-occurring theme by Aljughaiman and Mower-Reynolds (2005). Although it has been claimed by Kaufman, Davis and Beghetto (2012) that comparable cases could be made for life in organizations, hardly any research has been done to answer similar questions for this paradox at the workplace. Empirical research regarding the values of employees considering the behavior of their team-members, especially regarding the emergence of novel ideas has not been found – in which lie the possible contributions of current research. As O'Shea and Buckley (2007) argue, most psychologists have tended to "shy away from the more technological or business level topic of innovation […]" (p. 102). Even though many conceptual psychological studies have been published (DeFillipi, et al. 2007; Cummings, 1965; Thompson, Jones, & Warhust, 2007), most empirical research in organizations has been done on innovation, a field that has only partially been mediated by findings of the field of creativity.

However, questions regarding the management of creative employees and the creative processes have been explored, touching the paradox for creativity in two ways. To begin with, it is well-researched that the team-context is crucial in stimulating the team members' creative performance (Zhoe, & Hoever, 2014; Hirst, Knippenberg, Chen, & Sacramento, 2011). For example, whereas creativity is fostered the best in diverse teams with regular newcomers, managerial practice 'favors homogenous and proven teams' (DeFillipi, et al. 2007). Secondly DeFillipi et al. argue for an antagonism in the values of efficiency and profitability found on the one hand, contrasting the need for exploration. This means that organizational creativity operates on a tension between commerce and

uncertainty associated with creativity. Thompson et al. (2007) calls this tension illustrative 'the eternal battle between creatives and suits'. These findings seem to touch the described paradox of creativity; the importance of creativity seems clear in organizations, but actual behavior is often not in line with the needs of creativity.

This study is aimed in the first place at investigating the paradoxical view towards creativity in organizations – do people express support for the creativity of team-members, or do they not? In a second part, this study will suggest how contextual and individual factors – operationalized as a positive organizational climate and a promotion-focus attitude - might help the emergence of expressed team level support for creative ideas. It is hypothesized that individuals who are employed in an organizational climate which is more open for change, innovation, and creativity, in turn will create a more pleasant climate for their co-workers. It is also suggested that this will hold for individuals who are more promotion-focused; they are expected to support creative traits and new ideas to a higher extent than individuals with a prevention focus. Woodman et al.'s (1993) *interactionist* model is used to propose that both contextual and individual factors will contribute to the tolerance of employees for creative ideas of their team members. To achieve these objectives, the impact of organizational climate and the regulatory focus theory are investigated in the existing literature and examined in the current research to identify the factors that contribute to more expressed support for creative ideas of team members in their direct environment.

Expressed support for creativity

Arguably, creative *performance* has been one of the most researched constructs within the field of organizational creativity, emulated by measures of the *perceived support* for creativity. Two closely linked concepts; perceived support for creativity has been found to enhance creative performance in numerous studies (Dul, & Ceylan, 2014; Dileillo, Houghton, & Dawley, 2011; Zhou, & Hoever, 2014; Hunter, et al. 2007). Dul and Ceylan, for example, concluded that firms with a creativity-supporting work environment introduce more new products to the market, and this environment also enhances the success of new products in the market. These findings suggest that in an environment supportive of creativity, it is more likely that creative behavior will occur, and vice versa. Hence, a non-supportive environment may create a gap between creative potential and creative practice, in which untapped organizational resources might be lost (Dileillo, et al., 2011).

Despite the importance of these findings, is 'perceived support' a substantially different measure than its' counterpart: 'expressed support' for creativity. If employees are open to new ideas, constructively challenge one another, provide feedback, trust and help each other, and share a commitment to their work, the employees can be said to support creativity (Dileillo, et al., 2011). In every work-group, employees' will have intentions to constitute an organizational climate for their group members. For example, they might value progressive behavior, or disdain emotional behavior. In doing so, they will constitute the climate for creativity as perceived by their co-workers. This might be

either detrimental or supportive of creative ideas. If an organization wants to intervene in this creativity-supporting environment it will be necessary to create insight in the intentions of employees regarding their contribution to the environment of others; will they support new ideas, or disdain them?

Expressed support for creativity is an important part of the creativity paradox (DeFillipi, et al., 2007). This paradox would be confirmed if people report not to favor traits that are common among creatives, such as non-conformism or emotional behavior. Westby and Dawson (1995) measured the attitudes of teachers toward traits that were found to characterize creative children or would least characterize creative children. They found that teachers appeared to have a negative view of characteristics associated with creativity. However, this valuation was accompanied by a *positive* evaluation for creativity. Although not intended by the teachers, these findings suggest an inhospitable environment for creative students. Teachers believe to foster creativity, but in reality do not value traits associated with creativity. This inhospitable environment is also hypothesized in current research, transferred to the situations that could occur in most modern organizations. It is expected that the traits that have been described as least typical of a creative person will be valued higher than creative traits by employees. The more one values the typical creative traits and the less the typical non-creative traits are valued, the more support this individual is assumed to express for creativity of their colleagues As a consequence, the first hypothesis is:

Hypothesis B1   Non-creative traits will be valued higher than creative traits.

A further consideration of the creativity paradox can be established by taking into account employees' *conceptualizations* of creative colleagues. Gibson (2005) argues wrong conceptualizations to be wrong beliefs about what creativity is, and what it is not. Research among lay people found that people often not accurately describe creative people (Kaufman, & Beghetto, 2013; Lee, & Seo, 2006). For example, Lee and Seo found that Korean elementary teachers not fully recognize the personal component of creativity, neglecting the behavioral and personal characteristics of students. These findings thus indicate a wrong conceptualization. Similar to the creativity paradox itself, most research on the conceptualization of creativity is done in the field of education. As suggested by Aljughaiman and Mower-Reynolds (2005), teachers often are unaware of the primary defining characteristics of creative students. For example, flexibility, divergent thinking and elaboration were not mentioned by teachers as abilities of creative students, although consensus is reached in the scientific field about the importance of these characteristics for creativity. Aljughaiman and Mower-Reynolds also suggest that teachers identify students as creative if they demonstrate likeable characteristics, but overlook creative students who manifest negative behaviors. The teachers that participated in their research were asked to describe creative students. These teachers described students with positive traits and the

characteristics that are commonly liked by teachers (e.g. 'enthusiastic about learning'). This suggests that teachers' conceptualization of creativity is at odds.

Taking the findings that individuals might have a wrong conceptualization of creativity into account, current research suggests that employees might be biased in their conceptualization. This follows the conceptual research of Flynn and Chatman (2001), who provoke a 'strong normative pressure to endorse creativity'. Also in line with this normative pressure, previous research has shown that employees speak out in favor of the importance of providing opportunities to express creativity in teams (Hunter, Crushenbery, Friedrich, 2012; Mellander, Florida, Rentfrow, 2012). The normative pressure Flynn and Chatman (2001) introduce, supposedly evokes a discrepancy when asking for employees' conceptualization of creativity. This discrepancy is illustrated by Karwowski (2007), who found that teachers' nominations of creative students were correlated with school grades but not with creative potential as measured by tests and questionnaires. This leads to the expectation that when people report to prefer some personality traits, they will report these as more creative as well since they are expected to experience this normative pressure – irrespective of whether these traits are categorized as creative, or not. Specifically, it is hypothesized that employees tend to show a similar pattern when rating characteristics of an *ideal* and a *creative* colleague. Therefore, if individual attributes are rated more positive, they are expected to be rated as more creative as well. The proposed effects of Hypothesis 2 are presented visually below in Figure 3.

Hypothesis B2a   *Employees that evaluate creative characteristics more positive, will rate the creative characteristics as more creative.*

Hypothesis B2b   *Employees that evaluate non-creative characteristics more positive, will rate the non-creative characteristics as more creative.*
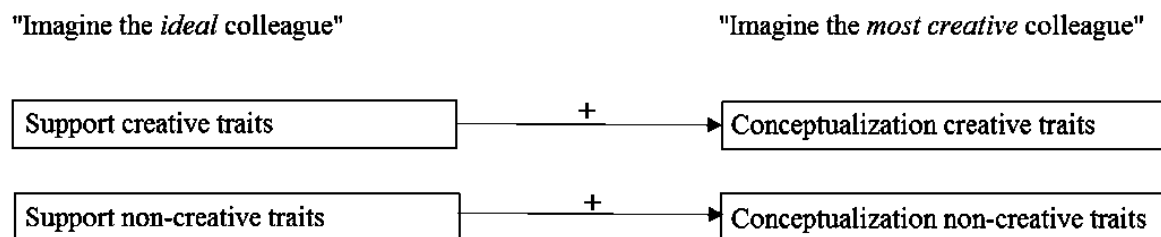

Figure 3. Visual presentation of Hypothesis *B2a* and *B2b*.

The hypotheses above (Hypotheses 1 and 2) aim to further the understanding of the creativity paradox. But besides enhancing this understanding, current research also aims to contribute to the explanation of

the creativity paradox, by exploring the role of correlates of expressed support for creativity. Similar to Study 1, Woodmans' (1993) *interactionist* perspective is enhanced. This means that both contextual factors and individual attributes are of importance for the creative performance of an organization. In this research, this has been translated to the contextual factor the 'climate for creativity' and the individual attribute the 'Regulatory Focus'. It is expected that both will contribute to the support an individual expresses for creativity.

Climate for creativity

The climate for creativity, seen through Ekvall's model (1996), is defined as the "observed and recurring patterns of behavior, attitudes and feelings that characterize life in the organization". Ekvall's model has been explained further in Study 1. To my knowledge, no previous research is conducted considering the effects of the specific climate for creativity on the expressed support by employees, nor has the molar organization climate been researched for its' effect on the expressed support. However, the climate for creativity has been linked to the creative performance in previous research (Isaksen, et al., 2001; Carr, et al., 2003). In current research it is hypothesized that employees that work in a more supporting climate for creativity, in turn will 'pay it forward' in their expressed support for creativity.

Touching on these expectations, research considering the influence of the organizational climate on employees attitudes, found a positive relationship. For example, Ferris, et al. (1998), found less organizational cynicism in organizations with a more positive climate. More applicable to creativity is research conducted by Shin, Taylor and Seo (2012); who found that more organizational inducements were positively related to employees' commitment to organizational change, which in turn was found to enhance creative support for change. Thus, although no research has been conducted yet towards the relationship between the climate for creativity and expressed support, an expected positive relationship can be derived from related research. Therefore, it is expected that the more positive an employee will perceive the climate for creativity, the more support he or she will express.

Hypothesis B3 *The more positive the climate for creativity is perceived, the more support for creativity will be expressed.*

Regulatory Focus Theory

As proposed in Woodmans' (1993) interactionist perspective, both organizational and individual differences are of influence for the creative performance of an organization. One of the individual characteristics which is important is found in the *regulatory focus theory* (RFT) (Brockner, Higgins, & Low, 2004). This motivational model, regulating human's goals, emotions, and behavior, stresses the existence of two motivational systems; *prevention* and *promotion* (Baas, De Dreu, & Nijstad, 2011).

These systems are stated on the conception that humans are pain-avoidant and pleasure-approaching. The prevention system addresses the regulation of negative outcomes; avoidance-oriented behaviors, away from harmful situations. The promotion system, on the other hand, works towards desired outcomes; people maintain approach-related behavior towards positive end states. These states can be both chronically and situationally induced.

In previous research, individuals with a promotion focus are found to be more open to new experiences (Liberman, Chen, Camacho, & Higgins, 1999). In decisions between stability and change, promotion-oriented individuals more often chose for change, compared to prevention-oriented individuals. Also in the field of creativity, promotion-oriented individuals are found to be more creative. They are found to be more flexible thinkers, which causes the accessibility of more remote informational links and the finding of new connections between concepts and categories (Förster, & Dannenberg, 2010; Baas, De Dreu, & Nijstad, 2011). More specifically, Förster and Higgins (2005) found that promotion-focused individuals are faster at global processing, whereas prevention-focused individuals were faster at local processing. This implies the ability of promotion-focused individuals to see the forest rather than the trees; the greater good of a novel idea is thus supposedly faster recognized by promotion-focused employees.

These findings all lead to expectations about the employees' implicit attitudes towards creatives in the organization. These expectations were further grounded by findings that promotion-focused individuals are more willing to adopt risky and exploratory approaches to 'insure hits and insure against errors of omission' (Crowe, & Higgins, 1997). According to these findings, it is expected that individuals with a stronger promotion focus are expressing more support for colleagues' creativity, compared to prevention-focused individuals. Supposedly, promotion-focused individuals will score the creative traits higher compared to the prevention-focused individuals, consequently Hypotheses B4a and B4b are formulated as follows:

Hyp B4a   *Individuals with a stronger* promotion-*focus will express more support for creativity than individuals with a weaker* promotion *focus.*

Hyp B4b   *Individuals with a stronger* prevention-*focus will express less support for creativity compared than individuals with a weaker* prevention-*focus.*

Finally, an indirect effect of the climate for creativity is expected. More specifically, the climate for creativity is expected to induce the Regulatory Focus systems. As proposed in the RFT, both regulatory systems of prevention and promotion can be emphasized either chronically or momentarily (Förster, & Higgins, 2005; Higgins, 1997, Baas, De Dreu, & Nijstad, 2011). Individual differences are assumed to create a chronic promotion of prevention focus that people will adopt across situations. For example,

differences might be found in personal values, the need for achievement or the need for security (Wallace, & Chen, 2006). However, Higgins (1997) stated that situational framing will also influence individuals, therefore inducing either a prevention or promotion focus. It is suggested by Wallace and Chen that situational cues may be enhanced by a challenging climate, focused on achievement, for example. Therefore, the organizational climate is expected to capture situational cues that either induce a prevention or promotion focus. Wallace and Chen (2006) found support for these situational cues influencing the regulatory focus in the safety climate of an organization.

These situational cues were also found when linked to creativity. Neubert, Kacmar, Carlson, Chonko and Roberts (2008) found that two distinct leadership styles, servant leadership and initiating structure, both evoke a particular regulatory focus among employees. Leaders who were perceived to have a servant leadership style were found to evoke a stronger promotion focus, in turn leading to more helping and creative behavior. The opposite was found true for leaders who were perceived to have a leadership style of initiating structure. Also other empirical research found a mediating role of the regulatory focus between transformational leadership and employee creativity (Henker, Sonnentag, & Unger, 2014). Even though leadership style cannot be said to be similar to organizational climate, it has been found be an important constituting factor – climate has been called 'the lever of leadership style' (Ekvall, Ryhammar, 2008).

Taken together, these findings suggest an evoking role of the organizational climate for the regulatory focus of employees. The five measured dimensions of the organizational climate, a) challenge and involvement, (b) idea-support, (c) idea-time, (d) risk-taking and (e) debate, are thus expected to be positively related to the promotion focus of employees, and negatively to the prevention focus. In turn, prevention and promotion are expected to influence the expressed support for creativity, as explained before. This means a mediating role for the regulatory focus theory is predicted.

Hyp B5a   *A promotion focus will mediate the positive relationship between a positive climate for creativity and expressed support for creativity.*

Hyp B5b   *A prevention focus will mediate the positive relationship between a positive climate for creativity and expressed support for creativity.*

The effects that are proposed in Hypothesis B3, B4 and B5 are presented visually below in Figure 4. No direction is given for the effect of *organizational climate* on the *prevention* and *promotion* focus, since opposite directions were proposed for the prevention and promotion focus in Hypothesis B5a and B5b. The same holds for the effect of *RFT* on *Expressed support for creativity,* regarding the expectations that were expressed in Hypothesis B4a and B4b.
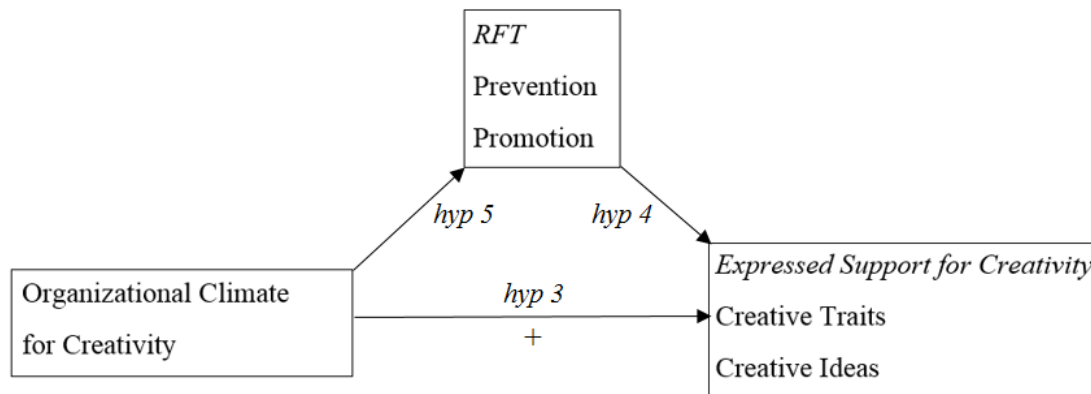
Figure 4. Proposed effects of the organizational climate and the prevention and promotion focus on expressed support.

METHOD

Procedure and Sample

The data were collected thru a Web-based survey. Participants were found by a snowball-technique. This method was chosen in order to reach as many people as possible. People were asked to forward the link to the survey to other people, whom in turn could do the same. The only inclusion criteria that was used was that respondents were asked in advance to only take the survey if they were working for an organization. As all snowball methods, this online method will involve sample bias. However, the nature of this online distribution is argued to be valid by Brickman-Bhutta (2009), since it is argued to reach a more diverse sample of the population. This procedure resulted in 131 respondents, of which a vast majority is female [$n = 91$ (69.5%)]. The average age in the sample is 36, ranging from 19 to 66 years, and the respondents have had an average of 17.1 years of education [SD = 12.3, min = 8, min = 23]. The average time the respondents are working for their current organization is 6.6 years [SD = 7.50, min = 0, max = 34. All participants were informed that the questionnaire would take 12-15 minutes, and the language in the survey was Dutch. The concepts that have been operationalized were (a) *support for creativity*, (b) the *conceptualization of creativity,* to what extent the respondent had a (c) *prevention* or *promotion* focus, and finally a respondents' assessment regarding the (d) *climate for creativity*. A complete overview of the questionnaire is provided in Appendix B.

Measures

Support for creativity

Respondents' expressed support for creativity has been measured in two ways; *support for creative traits* and *support for new ideas*. It was decided to include two measures of globally the same construct,

since they provide a different angle on *expressed support* in general. The former, support for creative traits, is expected to measure a more implicit attitude, whereas the second is intended to measure a more explicit attitude. This second measure asks people to report their support for new ideas directly, whereas the first measure indirectly measures support for creative traits. This will be explained below. The reason to measure both implicit and explicit attitudes is to cope with validity problems both measures might experience. Measuring implicitly might not well represent the actual behavior of individuals. However, the findings that lay people often have a wrong conceptualization of creativity, might cause validity problems when using an explicit measure.

The former, support for creative traits, is based on Westby and Dawson's (1995) research. Based on previous research, they selected twenty adjectives or adjective phrases as the ten most and ten least characterizing the creative employee. This same list was translated to Dutch, containing the same personality traits. Respondents were presented the list with these twenty traits, and were asked to rate their *ideal* colleague on these attributes using a 5-point Likert scale, ranging from 1 'Not at all' to 5 'Completely'. The ten traits to characterize the creative employee were: impulsive, nonconformist, emotional, progressive, determined, individualistic, taking chances, making up the rules as he or she goes along, tends not to know own limitations, tries to do what others think is impossible and likes to be alone when creating something new. The ten traits least characterizing the creative employee were: tolerant, practical, reliable, dependable, responsible, logical, understanding, appreciative, good-natured and sincere. In Table 6, Appendix C, the mean ratings these twenty traits received are reported, the alleged creative traits printed italic.

Two scales were constructed based on these ratings. In order to do so, the mean rate of the creative adjectives was calculated, as well as the mean rate of the non-creative adjectives. The mean was taken since all attributes should contribute to the same extent to the scale. This resulted in a scale '*support creative traits*' (M = 3.07, SD = .362, min = 1.90, max = 4.00) and a second scale '*support non-creative traits*' (M = 4.15, SD = .364, min = 1.80, max = 4.14). Reliability scores of these scales were not assessed due to the nature of these scales; the items that contributed to the scales are not formulated to yield a high consistency.

Support for new ideas

The second measure of expressed support for creativity used items based on the *Creativity Fostering Teacher* (CFT) index, and will be called *support for new ideas*. This measure was included in order to measure respondents' attitudes if asked explicitly for their support for new and creative ideas, since this might yield contrasting results to the implicit measure of *support for creative traits*. Of the initial 45 items that measure teachers' implicit attitudes toward creative children in the CFT, seven items were selected (e. g. I value colleagues' suggestions, even if they are not practical or useful). These seven items were selected for being most applicable in a work situation with colleagues. Employees were

asked to rate these statements according to their own expressed support at work. This was done using a 5-point Likert scale, ranging from 1 'Not at all' to 5 'Completely'.

An Exploratory Factor Analysis was conducted to check whether these seven items were measuring the same concept. Six items loaded on the first factor (Eigenvalue = 2.40; 34.2 % of Variance), a seventh item loaded .594 on a second factor (Eigenvalue = 1.06; 15.18 % of Variance). This last item ('I give my view on a suggestion immediately, whether I agree or disagree with my colleague') theoretically fits the other items, so this high loading on a different factor was surprising. However, this was the only item that was reverse formulated - a higher score meant less support. This might have influenced its' reliability. The Cronbach's alpha of the seven items was .586, which could be improved to .690 if this seventh item would be deleted. Based on both the EFA and the reliability scores, it was decided to construct a scale based on the remaining six items. A new EFA was conducted that just included these items. A single-factor solution was extracted (Eigenvalue = 2.39, 39.81 % of Variance), with all factor loadings exceeding .36. Subsequently, factor scores were saved using the regression method, resulting in a scale 'support for new ideas'.

The most creative colleague

Respondents' *conceptualization* of creativity has been operationalized similar to the ratings of the *ideal* colleagues. A list was presented, consisting of the twenty attributes identified before. The same order of the attributes was maintained, compatible to the question regarding the 'ideal' colleague. Respondents were asked to imagine the most *creative* colleague, and indicate to what extent this colleague would match the list of personality traits. In Table 7, Appendix C, the mean rates these twenty traits received when conceptualizing creative colleagues are reported, with the alleged creative traits printed italic.

Two scales were constructed measuring a respondents' conceptualization of a creative colleague. In order to measure ones' rate of all creative characteristics, the mean of these ten characteristics was computed. This was also done for all alleged non-creative characteristics. The first scale was called 'conceptualization, creative traits' (M = 3.76, SD = .521, min = 2.40, max = 4.90). The second was called 'conceptualization, non-creative traits' (M = 3.55, SD = .611, min = 2.10, max = 5.00). For the same reason as when considering rates of an ideal colleague, no reliability measures are appropriate for this scale.

Regulatory Focus Theory

Respondents' prevention and promotion focus was assessed thru ten statements on a 5-point Likert scale, ranging from 'Not at all' to 'Completely'. This list was based on a version as published by Lockwood, Jordan and Kunda (2002). The version used had been shortened and reformulated specifically for work situations in previous research. Five items were devoted to the prevention-scale

(e.g. in general, I am focused on preventing negative events at work.), and five to the promotion-scale (e.g. I typically focus on the success I hope to achieve at work in the future).

Two scales were constructed by calculating the mean of these items: the five items devoted to the promotion-focus were included in the *promotion-scale.* This scale showed a sufficient Cronbach's alpha of .71, exceeding the common threshold of .70 (Field, 2009). For the *prevention-scale* all five items devoted to the prevention-focus were included. However, Cronbach's alpha did not show a sufficient value (α = .62). This value could be improved to .70 by excluding two items from the scale. The items were examined substantively, and it was found that these two items seem to measure a different dimension within the prevention focus – they focus on actions rather than thoughts. Since a different aspect of the same concept should not be excluded, the scale was constructed by calculating the mean of all five items, thus proceeding with a Cronbach's Alpha of .62.

Climate for creativity

The climate for creativity has, compatible with Study 1, been operationalized using the Situational Outlook Questionnaire (SOQ) (Isaksen, et al., 2001). However, not all nine dimensions have been used in current research: the climate for creativity is operationalized thru challenge and involvement (CI), idea-support (IS), idea-time (IT), risk taking (R) and debate (D). These five dimensions were mostly selected based on the results of a Factor Analysis that has been performed by Isaksen (2007) on a sample of 4.730 observations; together these five dimensions accounted for 50.71 percent of the variance. The version used, covering these five dimensions, consisted of thirty items, which were all answered on 4-point Likert scales, ranging from 0 ('not at all applicable') to 3 ('applicable to a high degree'). An example of an item in the *challenge and involvement* dimension is: 'Most people here enjoy contributing to the success of the organization'. In Appendix A, a complete overview of the items is presented.

These five dimensions were examined using an Exploratory Factor Analysis over the total of 30 items. Specifically, a Principal Axis Factor analysis was performed with allowance for oblique (Promax) rotation, since the five dimensions of the climate for creativity are expected to be related. Four factors with eigenvalues >1.0 were extracted using the Kaisers' criterion (Castello, & Osborne, 2005). However, the fifth factor showed an eigenvalue of .998 and accounted for 3.3 percent of the variance. Therefore, also the fifth factor was extracted. The results of the EFA are presented in Table 8, Appendix E. The results were rather ambiguous, even though the theoretical proposed structure was roughly reflected. 6 items can be called *crossloaders,* loading over 0.3 on more than one factor (Castello, & Osborne, 2005). Furthermore, 4 items did load on different dimensions than was suggested theoretically. The underlying structure of these items has been validated in previous research (Isaksen, 2007), and a clean factor structure was found in Study 1 (See also Table 2), both of these findings were done including much larger samples. Therefore, it was decided not to use the structure found in the first EFA to construct scales for the five dimensions. Instead, separate factor analyses were conducted for each of the five dimensions. Cronbach alphas and zero-order correlations are reported below in Table

9. A sufficient reliability was found for all dimensions, exceeding the common threshold of .70 (Field, 2009). Factor scores were saved using regression method to construct scales for each dimension.

*S*ince the nature of the hypotheses does not require separate analysis of these five dimensions of the climate for creativity, one scale was constructed that represents all, by taking the mean of the five dimensions. This also will account for the problem of multicollinearity that might emerge when including all five dimensions in the same analyses; since they measure similar constructs, they might control for each other. The correlations of this scale with the separate dimensions are included in Table 9. This scale, referred to as 'climate' will be used in further analysis.

Table 9

Zero-order correlations and reliabilities of five dimensions and overall scale (n = 131).

	CI	IS	D	IT	RT	*α*
Challenge and Involvement	.					.88
Idea-Support	.67*	.				.90
Debate	.47*	.59*	.			.85
Idea-Time	.56*	.78*	.55*	.		.87
Risk-Taking	.44*	.67*	.65*	.65*	.	.73
Climate	.77*	.90*	.79*	.86*	.82*	.88

Note. * = p < .001

Control Variables

In the analyses was controlled for age, gender, educational attainment and organizational tenure. *Age* has been operationalized by asking for year of birth. Gender was operationalized to a dichotomous variable *male* (0 = female, 1 = male). Regarding the *educational attainment*, categories were provided according to the Dutch schooling system and have subsequently been translated to the years of education a respondent achieved. This operationalization, years of education, has been used in previous research considering the climate for creativity (Shen, Jackson, Ding, et al., 2014; Lavian, 2012), as well as in Study 1. Education was included because it provides a proxy for knowledge (Zhou, et al., 2012), and has been positively related to individual creativity in earlier research (Woodman, Sawyer, & Griffin, 1993; Nusbaum, & Silvia, 2010). The *length of ones' employment* in their current organization was asked for in years. Organizational tenure is used in earlier research by Zhou et al. as indicator for the experience one has, and thus might explain the expressed support for creativity.

RESULTS

Descriptive statistics

Descriptive statistics of all variables are presented below in Table 10, as well as the zero-order correlations of all study variables. Though not all correlations were found significant, in general, all expected directions are confirmed; all significant correlates are in the expected direction. Since many correlations were found significant when using a less strict α (0.10), the sign $^+$ is used to indicate these correlations – caution should be paid when interpreting these. This was decided since a sample of $n =$ 131, is relatively small for the conducted analyses.

Regarding the proposed model in Hypothesis 3, 4 and 5, not all proposed correlations were found. The *climate for creativity* was positively related to both *support for creative traits* (p < .10) and *support for new ideas*. Also the expected pattern was partially discovered when studying the correlations between the regulatory foci and support; prevention was positively correlated to support for non-creative traits ($r = .33$, $p < .001$). Promotion, in turn, showed an inversed pattern; it correlated positive with support for creative traits (non-significant) and new ideas ($r = .19$, $p < .05$). Regarding the relations between the climate for creativity and the Regulatory Focus, prevention was negatively correlated to the climate for creativity, whereas promotion showed a positive correlation (p < .10).

Hypothesis testing

The first hypothesis of this study, predicting higher rates for non-creative traits when compared to creative traits, was tested using a *paired sample t-test*. This procedure compares the means of two variables for a single group. For each case, the difference of the two variables is computed, and it is tested whether the average differs from 0. The paired sample t-test was conducted on the two constructed scales 'support for creative traits' (M = 3.07, SD = .362) and 'support for non-creative traits' (M = 4.15, SD = .364). A significant difference was found between these two scales; t (130) = -24.83, $p <$.001. This confirmed hypothesis 1, creative traits were lower valued than non-creative traits.

Hypothesis B2a and B2b predict similarities between the scores people give to different attributes when rating their *ideal* colleague and to what extent respondents expect these attributes to be *creative*. To test these hypotheses, correlations are calculated between the rate respondents gave to an attribute when rating their *ideal* colleague and the rate they ascribed to the same attribute when rating the most *creative* colleague. Correlations were used since no causal implications are suggested – it will be unknown whether the 'liking' of an attribute influences the 'perception of the creative' or vice versa. Since correlations are symmetrical, reported correlations are working two ways (De Vocht, 2012). When considering the constructed scales, the correlations are presented in Table 10 above. The strong correlation between the *conceptualization* and *support* for creative traits supports Hypothesis B2a ($r = .35$, $p < .001$). This also holds for the *conceptualization* and *support* for non-creative traits ($r = .47$, $p < .001$), which provides support for Hypothesis B2b.

Table 10

Descriptive statistics and zero-order correlations of all stury variables (Study 2) (n = 131).

	Variable	Min	Max	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
	Dependent Variables															
1	Support creative traits	1.90	4.00	3.04	.36	.										
2	Support non-creative traits	1.80	4.80	4.15	.37	.07	.									
3	Support new ideas (factor scores)	-4.69	1.57	0.00	.87	.15+	.03	.								
4	Conceptualization creative traits	2.40	4.90	3.74	.52	.35**	.08	.12	.							
5	Conceptualization non-creative traits	2.10	5.00	3.54	.61	.04	.47**	.15+	-.36**	.						
	Independent Variables															
6	Dimensions Climate for Creativity (factor scores)	-2.09	1.79	0.000	.77	.16+	-.13	.39**	.05	.07	.					
	Mediator variables															
7	Prevention	1.60	5.00	3.20	.58	-.10	.33**	-.05	.05	.05	-.19*	.				
8	Promotion	2.20	4.80	3.73	.61	.09	-.01	.19*	.02	.12	.16+	-.10 é	.			
	Control variables															
9	Male	0	1	.305	.46	.08	-.10	.02	.08	-.14	.18*	.05	-.03	.		
10	Age	19	66	36.6	12.27	.15+	.05	.08	-.18*	.17*	-.00	-.07	-.25**	.01	.	
11	Educational attainment (yrs)	8	23	17.1	1.89	.07	-.19*	.00	.12	-.27**	.09	.02	.02	-.01	.01	.
12	Time in current organization (yrs)	0	23	6.6	7.50	.03	.08	.05	-.16+	.15+	-.01	-.00	-.17*	.06	.66**	-.02

Note. + = p < .10, * = p < .05, ** = p < .01

To provide a more specific view, Table 11 below presents the correlations of the rates respondents assigned to the attributes when rating their *ideal* colleague and the same attribute when *conceptualizing creativity*. The left column represents the correlation of both rates, only taking the alleged creative attributes into account. For example, the rating for 'progressive' on the *ideal* colleague correlates positively with the rating of 'progressive' on the *creative* colleague ($r = .42, p < .001$). As this first column shows, almost all correlates are found to be positive – the more one 'likes' an attribute, the stronger this attribute is perceived as creative. Especially 'nonconformist' and 'individualistic' show strong correlations. Only the attribute 'likes to be alone when creating something new' is not found significant. Taking these findings into account, Hypothesis B2a seems to be supported by the data.

Similar findings are reported when considering Hypothesis B2b. This hypothesis predicted that employees who evaluate non-creative characteristics more positive, will also rate the non-creative characteristics as more creative. As presented in the right column of Table 11, this holds for all alleged non-creative attributes, especially for 'reasonable' and 'appreciative'. These results suggest that Hypothesis B2b is supported by the data.

Table 11

Correlations creative and non-creative attributes of ideal *with* most creative *colleague (n = 131).*

Creative attributes	R	Non-creative attributes	r
Impulsive	.19*	Practical	.25**
Emotional	.41***	Reliable	.38***
Tends not to know own limitations, and tries...	.34***	Sincere	.33***
Progressive	.42***	Reasonable	.48***
Likes to be alone … creating something new	.16	Good-Natured	.31***
Takes chances	.36***	Understanding	.34***
Nonconformist	.45***	Responsible	.27**
Dedicated	.39***	Dependable	.23**
Individualistic	.48***	Tolerant	.31***
Makes up the rules as he/she goes along	.37***	Appreciative	.41***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Expressed support for creativity, climate and Regulatory Foci

In order to investigate the association between *expressed support for creativity,* the *climate for creativity* and the *prevention* and *promotion* focus, OLS regression analyses are conducted to examine Hypotheses 3, 4 and 5. With a regression analysis, one will investigate the partial correlation coefficients, while being able to control for other variables. Regression analyses are also convenient since the hypotheses predict that prevention and promotion focus will serve as a mediator between climate dimensions and the expressed support for creativity.

The proposed model is a simple mediation model (Field, 2009; Hayes, 2009). When using an OLS regression, Baron and Kenny's *causal steps approach* can be used to examine the mediator function of the Regulatory Focus variables (1986, in: Hayes, 2009). According to Hayes, the *causal steps approach* is the most widely-used method for testing these models. Each of the paths in the model will be estimated, and conclusively the mediator function will be tested. In step 1 of Baron and Kenny's approach the independent variable *organizational climate* (X) should show a direct effect on the mediator (M) variable, *prevention* and *promotion* focus (effect *a*). Secondly, *organizational climate* should be significantly related to the dependent variable (Y) *expressed support for creativity* (effect *c*). In the third step proposed in this model, the mediator should exhibit a significant effect on the dependent variable (effect *b*). Complete mediation will only be present if the effect of X on Y becomes non-significant after inclusion of M – if, however, the beta value of X on Y decreases significantly upon the addition of M, one could indicate a partial mediation (effect *c'*).

The proposed mediation effect was tested in two different compositions since analyses were done on *support for creative traits* as well as on *support for new ideas*. The results of the analyses regarding the first measure, *support for creative traits*, are presented in Table 12. Results for the second measure, *support for new ideas*, is presented in Table 13. First a null-model was analyzed, including exclusively the control variables to explain expressed support for creativity. In doing so, it is possible to tell whether the inclusion of *climate* and *prevention/promotion focus* explain expressed support beyond the effects of the control variables. Negligibly effects were found for the control variables; just *age* showed an effect of .246 ($p < .05$) on *support for creative traits*. For the *support for creative traits* measure, the control variables explained 4.6 percent of the variance. For the second measure, *support for new ideas,* just 0.7 percent of the variance was explained by the control variables (see Table 13).

To test Hypothesis 3, predicting a positive effect of the *climate for creativity* on the expressed support for creativity, *climate* was added to the control variables in Model 1. For *support for creative traits*, no significant effect was found for *climate*. The percentage variance accounted for in the model increased to from 4.7 percent to 6.3 percent, which was not a significant improvement ($R^2_{change} = .017$, $F (1, 124) = 2.245$, p = ns). For the second measure, *support for new ideas*, the inclusion of *climate* in Model 1 showed a significant effect ($\beta = .41$, S. E. = .095, p < .001), in the predicted positive direction. For this model, the percentage variance accounted for increased from 0.7 percent to 16.5 percent after adding climate, a significant improvement ($R^2_{change} = .159$, $F (1, 124) = 23.596$, p < .001). Therefore, Hypothesis B3 was partly supported by the data.

Table 12

Standardized coefficients of the OLS regression on 'support for creative traits', using Baron and Kenny's causal steps approach (n = 131).

	Null	Model 1	Prevention Model 2	Promotion Model 2	Model 3
	$C \rightarrow Y$	$X \rightarrow Y$	$X \rightarrow M$	$X \rightarrow M$	$M \rightarrow Y$
Independent Variables (X)					
Climate for creativity		.13	-.21*	.18*	
Mediator Variables (M)					
Prevention					-.08
Promotion					.14
Control Variables (C)					
Male	.10	.07	.09	-.07	.11
Age	.25*	.24*	-.12	-.25*	.27*
Educational attainment (yr)	.06	.05	.04	.01	.06
Time in the organization (yr)	-.14	-.14	.07	.00	-.13
Constant	2.63***	2.67***	3.13***	4.19***	2.46***
R^2	.05	.06	.05	.09	.07

Note. *p < .05. **p <.01. ***p<0.001

Table 13

Standardized coefficients of the OLS regression on 'support for new ideas', using Baron and Kenny's causal steps approach (n = 131).

	Null	Model 1	Prevention Model 2	Promotion Model 2	Model 3	Model 4
	$C \rightarrow Y$	$X \rightarrow Y$	$X \rightarrow M$	$X \rightarrow M$	$M \rightarrow Y$	$X \rightarrow M \rightarrow Y$
Independent Variables (X)						
Climate for creativity		.41***	-.21*	.18*		.38***
Mediator Variables (M)						
Prevention					-.02	
Promotion					.22*	.16
Control Variables (C)						
Male	.02	-.06	.085	-.70	.03	-.05
Age	.08	.07	-.117	-.25*	.13	.11
Educational attainment (yr)	.00	-.03	.041	.01	-.00	-.03
Time in the organization (yr)	- .00	.01	.068	.00	-.00	.01
Constant	-.24	.10	3.125***	4.19***	-1.43	-1.09
R^2	.01	.17	.053	.09	.05	.19

Note. *p < .05. **p <.01. ***p<0.001

The fourth hypothesis predicted a positive effect of a stronger promotion focus (Hyp B4a) and a negative effect of a stronger prevention focus (Hyp B4b) on expressed support (both creative traits and new ideas). The test for these hypotheses was done in Model 3, which includes the control variables and the *prevention* and *promotion* focus. *Promotion* and *support for new ideas* previously showed a moderate zero-order correlation ($r = .19$, $p < .05$), unlike the other predicted relationships (see Table 10). These zero-order correlations were reflected in the OLS regression. Adding the promotion focus to the control variables, yielded a positive effect ($\beta = .22$, S.E. $= .130$, $p < .05$), conform Hypothesis B4a. The percentage variance accounted for, increased from 0.7 percent to 5.4 percent ($R^2_{change} = .047$, $F(1, 124) = 6.177$, $p < .05$). For the prevention focus, no effects were found, nor an effect of the promotion focus on support for creative traits. Taking these results into account, Hypothesis B4a was partially confirmed, and no support was found for Hypothesis B4b.

In order to find support for the proposed mediation effect of the Regulatory Focus (Hyp B5a and B5b), both the direct effects of climate and the Regulatory Focus had to be confirmed (Hayes, 2009). As this occurred only in the combination of *support for new ideas* with the *promotion* focus, this is the only set that met the prerequisites of Baron and Kenny. Therefore, Model 4 has only been performed on this set, as is presented in the most right column of Table 13. Both promotion and climate were included to predict *support for new ideas*. The mediation effect would be supported if the effect of *climate* drops, or becomes non-significant, while the effect of *promotion* remains significant. This mediation effect was not supported. First of all, the effect of climate drops slightly, but does not loose significance. And second, the effect of promotion-focus itself drops out of significance. Therefore, the proposed mediation effect is not confirmed, suggesting no support for Hypotheses B5a and B5b. The data showed significant effects between climate and the Regulatory Foci; the more positive the climate was perceived, the stronger the promotion focus and the weaker the prevention focus was found to be.

CONCLUSION and DISCUSSION

This research serves two main objectives; on the one hand, the paradox for creativity was assessed in an organizational setting. Secondly, the effects of a more positive climate for creativity and the mediating role of the regulatory foci were explored. Pursuing these two objectives, this research aimed to contribute to the understanding and explanation of the paradox of creativity in an organizational setting, since most previous research regarding this paradox was conducted in an educational setting.

First, the emergence of the paradox for creativity in organizational settings is considered. Two hypotheses were devoted to this question. The first hypothesis was confirmed by the findings; non-creative traits were valued more positively than creative traits. This means that employees prefer colleagues with non-creative traits over employees with creative traits. Of the twenty traits (10 creative

and 10 non-creative traits) that were rated by the respondents, nine out of ten creative traits were ranked in the lower ten of the twenty attributes. 'Dependable' was the only non-creative trait that was also ranked among the lower ten traits. This low support for creative traits, when compared to non-creative traits, is in line with previous research conducted by Westby and Dawson (1995) in educational settings. It suggest that less approval is given to creative traits than to non-creative traits. It should be noted, creative ideas seldom are following the line of least resistance – similarly, creative traits will not all be practical traits in a work environment. It thus might be argued that to some extent this low support is understandable. Nevertheless, support is needed to promote creativity in organizations, thus awareness should be enhanced.

Also the second hypothesis, considering employees' implicit conceptualization of creative employees, was supported by the data. Similarities were found between the traits one considers characteristic of an *ideal* and characteristic of a *creative* colleague. The personality traits that an employee likes, thus were considered creative, and vice versa. Especially considering the alleged non-creative traits these findings are remarkable; a wrong conceptualization and low expressed support for creative traits companion each other. The normative pressure to endorse creativity that was argued previously by Flynn and Chatman (2001), thus seemingly is supported by the data. These wrong conceptualizations confirm the proposed 'paradox for creativity'.

The support that was found for both of these hypotheses indicates that people tend to show less support for creative traits when compared to non-creative traits, and that especially the people who show low support for creative traits have a wrong conceptualization of creativity. The conceptualized 'paradox for creativity' is thus confirmed; employees' attitudes towards creative traits do not reflect the importance of creativity for organizations. Moreover, since people show strong similarities in the traits they consider to be creative and the traits they consider part of an ideal colleague, it can be concluded that people believe to be supporting creativity among colleagues, regardless of this conceptualization is accurate, or not. This also yields support for the paradox; employees wrongly believe to like creative traits of their colleagues. People think they are enhancing creativity, but in reality this belief might be accompanied by a wrong belief of what creativity actually is.

The second objective of this study was to explain these attitudes (support for creative traits) using the perception of the *organizational climate* and the *prevention* and *promotion* focus of the employees. To create a stronger validity of current research, a second measure of support for creativity was included. The first measure was developed to measure implicit attitudes towards creativity; people had to rate the traits without knowing the traits represented creativity. As opposed to this first measure, *support for new ideas* was composed of items that asked respondents explicitly for their attitude towards new ideas. The analyses considering Hypotheses B3, B4 and B5 consequently were performed on both measures.

Hypothesis B3 expected a positive effect of the organizational climate on the expressed support, both for creative traits and new ideas. These expectations were supported for *support for new ideas*.

This means that people who are perceiving a more positive climate for creativity, also report to support new ideas, but do not report more support for creative traits. Thus, the proposed 'pay it forward' structure was partially confirmed; people that perceive a more positive climate help constituting a more positive climate for creativity for their colleagues by expressing more support for new ideas.

The predicted influence of the Regulatory Focus on the support people express for creative traits and new ideas (Hyp. B4), found little support in the data. Partial support for these hypotheses was only found when considering a promotion focus on support for new ideas; the stronger the promotion focus, the more support one expresses toward new ideas. This suggests support for the view that promotion-focused individuals are more open to new experiences, as Liberman, et al. (1999) argued. The prevention focus did not yield any results regarding the expressed support for creative traits and new ideas. However, although not addressed in the regression analyses, a moderate correlation was found between the prevention focus and expressed support for non-creative traits. Prevention-focused people express a stronger preference for non-creative traits. Thus, although the prevention focus does not exert an effect on the expressed support for creativity, it is likely related to the opposing side of the argument.

The fifth hypothesis suggested a mediation of the regulatory foci on the relationship between climate for creativity and expressed support for creative traits and new ideas. These expectations were not supported by our findings. Although the climate for creativity enhances a promotion or prevention focus, rather, these regulatory foci were not of influence on the expressed support for creativity, as Hypothesis 4 already indicated. These findings thus only yield support for the situational framing of the organizational climate that Higgins (1997) proposed. Seemingly, the climate for creativity captures situational cues that induce the promotion focus and hamper a prevention focus. On the other hand, inclusion of the climate for creativity made the effect of the promotion focus on support for new ideas drop out of significance. This indicates that the proposed mediation effect might work opposed to the expected direction. Since the effect of a promotion focus resigns after including climate, it is possible that the regulatory foci influence the perception of the climate, rather than the climate influencing the regulatory foci. Instead of the climate inducing a situational prevention or promotion focus, a chronical prevention or promotion focus might influence ones' perception of the climate for creativity.

To summarize the results regarding this model of climate, regulatory foci and expressed support: although a positive climate for creativity is accompanied by a stronger promotion focus and a negative climate for creativity by a stronger prevention focus, the relationship of these concepts with the expressed support for creativity remains rather ambiguous. The measure *support for creative traits* did not yield any results at all; the climate for creativity and the prevention and promotion focus supposedly are no correlates of the extent to which one values creative traits. *Support for new ideas* showed a positive effect of both the promotion focus and climate for creativity. The differences between support for creative traits and new ideas cause uncertainty about these measures, a limitation that will be discussed below.

The results of this study lead to some practical implications for the management of creatives within organizations. Main improvement could be argued to create awareness among employees about the characteristics that are involved when they want to support creative ideas. If employees recognize the paradox for creativity that often is created, they might be able to change patterns by behaving conscious in critical situations. Since creativity within organizations is an economic advantage in the fast changing societies, this awareness is of great importance for organizations. Creatives might, in the eyes of many, not be ideal colleagues to work with, nevertheless they are needed to foster the innovation of organizations.

The efforts of this study to contribute to the understanding of employees' attitudes towards creativity of colleagues were hampered by some limitations. Two of these limitations concern the measures of the expressed support for creativity, a concept that was leading throughout this research. The first limitation was indicated by the data itself; a weak correlation was found between the two measures of expressed support for creativity. There may be at least two possible explanations; (a) people might not have an accurate understanding about their attitude towards the new ideas as expressed by colleagues. This would imply that an explicit measure of expressed support for creativity is not a valid representation of reality. This is a reasonable explanation since previous findings suggest that the conceptualization of creativity by lay people is often at odds with reality (Westby, & Dawson, 1995; Beghetto, 2007; Runco, & Johnson, 2002), as was also confirmed in current research. This reasoning was also the reason to include the implicit measure of support for creative traits in the research. Or the low correlation between support for creative traits and support for new ideas is (b) caused by a low external validity of the measure for support for creative traits. Westby and Dawson (1995) did not publish validity measures of this method, nor did any other research that used similar methods. The included traits might be not validly representing a creative individual, or the method of rating these traits whether they are characterizing an *ideal* individual does not accurately measure the support for creative traits. In any case does the absence of a relationship between support for creative traits and support for new ideas raise concerns about the validity of these measures. These concerns are further underlined by the different results that the two measures yielded. A second limitation regarding the operationalization of 'support for creative traits' and 'support for new ideas', is that these concepts measure the attitudes of employees. Questions thus might be raised regarding the transferring of these attitudes to the actual supporting behavior of these employees.

Moreover, also the procedure and sample lead to several limitations of current research. Using surveys is associated with a so-called 'common method bias', showing the tendency to answer consistently. A correlation between climate and expressed support for new ideas might thus be induced by people who are consistently answering positive or negative, on both constructs. This bias can be also be induced by the length of a survey; people might report the same answer repeatedly on all statements, to finish the survey as soon as possible, a so-called HALO-effect (Kaplan, & Saccuzo, 2001). Also the sample contains limitations. Using my personal network, causes a response bias – the population might

not be well represented. Since the only inclusion criterium was that people had to work for an organization, the population was formed by all employees – an increadibly large population. Although a sample size of 131 is enough to perform the statistical analyses upon, generalizability to the larger population is seriously limited.

To conclude, the current research emphasizes the lack of support for creative traits, but was hardly able to help explain these by using the climate for creativity and regulatory foci. Both the confirmation of the paradox and lack clarification of the effects upon this paradox are fertile grounds for further research. A first, and main, recommendation is to assess the validity of *support for creative traits* and *support for new ideas*. Are these measures adequately able to distinguish between supporting and non-supporting employees? Both measures seem to measure different latent variables. Clarification of the external validity of these measures would thus improve the practical value of current research and similar research previously conducted. A more conceptual recommendation lies in an empirical consideration of the normative pressure to endorse creativity as conceptualized by Flynn and Chatman (2001). Pursuing understanding of this pressure supposedly contributes to the understanding of the wrong conceptualization that was found in current research. Do people feel pressured to characterize the traits they like in colleagues as creative? Questions should be addressed whether a norm actually is perceived, and the pressure people feel to conform to this norm. A third recommendation considers the structure between climate, Regulatori Foci and expressed support that was not validated in current research, since results did not yield a clean structure. Trying to answer similar questions in a different research design (e.g. case studies or longitudinal), might shed new light on these findings. Indicated by current findings, a certain structure does exist, which could not be distinguished in current research. In conclusion, current research indicates a paradox for creativity as was previously found in educational settings. The claims made that a paradox would also exist within organizational life, thus were confirmed. The validation and explanation of this paradox offer opportunities for further research to take up the questions raised in current research.

GENERAL DISCUSSION

Taken together, these two studies explored the climate for creativity. More specifically, study 1 and study 2 respectively considered the *perceived* and *expressed* support for creativity. A better understanding of the emergence of these concepts was pursued, in order to contribute to the practical value of both perceived and expressed support for creativity. Study one, which scrutinized the climate for creativity as an organizational feature, found that individuals all constitute a different perception of the climate for creativity. Individuals will all differ in their perceptions of the organizational climate, even though a significant part of the perception is shared among the employees. Thus, the findings of Study 1 suggest that *expressing* support for creative traits and new ideas actually would improve the climate for creativity as *perceived* by colleagues, creating fertile ground for Study 2. Expressing support for creativity supposedly will help colleagues to feel supported when discussing new ideas. Hence, although far from all expectations were confirmed, a better understanding of support for creativity in organizations is created.

Promoters and practitioners of organizational creativity thus will find practical value in helping employees understand the concept of creativity and consequently help them support creativity of colleagues. These colleagues, in turn, are expected to perceive the climate for creativity as more supporting. Since in current studies it is argued that all human labor contains some degree of creativity, this practical value supposedly is important for a wide variety of employees.

> *"The key question isn't 'What fosters creativity?' but it is why in God's name isn't everyone creative? Where was the human potential lost? How was it crippled? I think therefore a good question might be not why do people create, but why do people not create?"*
>
> - Abraham Maslow

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APPENDICES

Appendix A - Overview item Situational Outlook Questionnaire (study 1, incl. item codes).

CI1	People here feel energized about their work.
IT1	People here take time to test new ideas.
C1	There is a great deal of personal tension here.
D1	Many different points of view are shared here during discussion.
F1	People here make their own choices about their daily work.
PH1	People here exhibit a sense of humor.
C2	There are quite a few people here who cannot tolerate each other.
IS1	People here receive support and encouragement when presenting new ideas.
D2	Differences of opinion are frequently expressed here.
CI2	Most people here enjoy contributing to the success of the organization.
IT2	People here can change time-lines to think about new ideas.
PH2	People here have fun when they work.
IS2	People usually feel welcome when presenting new ideas here.
RT1	People here can move forward even in the face of uncertainty.
CI3	People here feel deeply committed to their jobs.
F2	Most people here usually control their own work
CI4	The atmosphere here helps inspire people in their work.
IT3	Time is available to explore new ideas here.
PH3	People here often engage in laughter.
D3	People here often exchange opposing viewpoints
F3	People here make decisions on their own to a fairly large extent.
CI5	People desire to improve the quality of work here.
C3	It is common here to have people plot against each other.
RT2	People here feel they can take bold action even if the outcome is unclear.
IS3	People here are usually accepting of new ideas.
CI6	People are committed to solving problems here.
IT4	People here have enough time to think about their ideas.
PH4	A playful atmosphere prevails here.
C4	There is a good deal of tension here due to prestige differences.
D4	A wide variety of viewpoints are expressed here.
RT3	People here often venture into unknown fields or areas.
F4	Most people here prioritize their own work to a rather large extent.

TO1 People here do not talk behind each others' backs.

IT5 The pace of work here allows for the testing of new ideas.

PH5 Good-natured joking and teasing occurs frequently here.

IS4 People generally share their ideas here because they are listened to and encouraged.

D5 People here often discuss different points of view.

CI7 People here take a sincere interest in their work.

F5 People here tend to define their own work projects.

RT4 People here are likely to put forward new or untested ideas.

F6 People here feel free to set their priorities.

PH6 The atmosphere is easygoing and lighthearted.

C5 There are power and territory struggles here.

TO2 People here believe in and trust each other.

C6 The atmosphere here is filled with gossip and slander.

IS5 Initiative often receives a favorable response here so people feel encouraged to generate new ideas.

TO3 There is no fear of being "stabbed in the back" here.

D6 It is possible to discuss different ideas and opinions here.

IT6 Most people have time to think through new ideas here.

TO4 People here act in an open and sincere manner.

RT5 People make changes here even when results are uncertain.

TO5 People here keep their commitments to each other.

Een Creatief Klimaat?

Geachte respondent, bij voorbaat dank voor het invullen van deze enquête. Er zullen verschillende thema's aan bod komen. Uw anonimiteit is volledig gewaarborgd. De resultaten worden in sommige gevallen per organisatie terug gekoppeld, waarbij nooit bekend zal zijn wie deze verstrekt heeft. Het onderzoek bestaat uit drie delen; uw collega's, uzelf en de organisatie. De vragenlijst zal waarschijnlijk 12 tot 15 minuten in beslag nemen.

Achtergrond gegevens

Wat is uw geslacht?

Man

Vrouw

Wat is uw geboortejaar?

Wat is uw hoogst afgeronde opleiding?

Basisschool

LBO/VBO/VMBO

MAVO

MBO

HAVO-VWO

HBO-WO-bachelor

WO Master

Other

Hoeveel jaar bent u werkzaam in uw huidige organisatie?

Hoeveel jaar bent u werkzaam in uw huidige positie?

Hoeveel directe collega's heeft u?

Deel 1 – Het team

Bedenk uw ideale collega - een verzonnen figuur. In hoeverre komt deze ideale collega overeen met de volgende kenmerken? Bijvoorbeeld: Zou uw ideale collega erg aardig zijn, vink dan 'helemaal' aan.

C1   Impulsief

C2   Emotioneel

NC1   Praktisch

NC2   Betrouwbaar

NC3   Oprecht

NC4   Redelijk

C3   Kent zijn/haar eigen beperkingen niet, en probeert dat te doen waarvan anderen zeggen dat het niet mogelijk is.

C4   Progressief

NC5   Aardig

NC6   Waarderend

C5   Houdt ervan alleen te zijn als hij/zij aan iets nieuws werkt

C6   Neemt risico's

NC7   Begrijpend

NC8   Verantwoordelijk

C7   Non-conformistisch
      Creatief

C8   Toegewijd

NC9   Afhankelijk

NC10 Tolerant

C9   Individualistisch

C10   Begint ergens aan, en bedenkt later de regels

Bedenk nu uw meest creatieve collega - weer een verzonnen figuur. Wij vragen u in te vullen in hoeverre deze creatieve collega overeen zou komen met de volgende 20 kenmerken.

C1   Impulsief

C2   Emotioneel

NC1   Praktisch

NC2   Betrouwbaar

NC3   Oprecht

NC4   Redelijk

C3   Kent zijn/haar eigen beperkingen niet, en probeert dat te doen waarvan anderen zeggen dat het niet mogelijk is.

C4   Progressief

NC5   Aardig

NC6   Waarderend

C5   Houdt ervan alleen te zijn als hij/zij aan iets nieuws werkt

C6   Neemt risico's

NC7   Begrijpend

NC8   Verantwoordelijk

C7   Non-conformistisch

C8   Toegewijd

NC9   Afhankelijk

NC10 Tolerant

C9 Individualistisch

C10 Begint ergens aan, en bedenkt later de regels

Terug naar de werkelijkheid. In hoeverre komen de volgende stellingen overeen met uw werkelijke samenwerking met collega's?

Ik geef collega's de mogelijkheid om ideeën en meningen uit te spreken.

Als een collega een idee heeft, vraag ik hem/haar het verder te verkennen voor ik een oordeel vorm.

Ik waardeer het als een collega in verschillende richtingen denkt, ook al zijn ze wellicht niet bruikbaar.

Ik moedig collega's aan vragen te stellen en suggesties te delen.

Ik geef direct mijn visie over een idee, ongeacht of ik het er mee eens ben.

Ik luister zorgvuldig naar ideeën van collega's ook al zijn ze niet praktisch en nuttig.

Mijn collega's weten dat ik hun suggesties niet lichtzinnig behandel.

Deel 2 – U en uw werksituatie

Er volgen nu tien stellingen over hoe u tegen uw werk aankijkt. Probeer op uw intuïtie af te gaan bij het beantwoorden van de vragen. In hoeverre zijn deze stellingen op u van toepassing?

Prev1 Ik ben erop gericht negatieve gebeurtenissen in mijn werk te voorkomen.

Prom1 In mijn werk streef ik ernaar mijn ideaalbeeld te behalen – het realiseren van mijn verwachtingen en wensen.

Prev2 Ik stel mezelf vaak negatieve dingen voor die zouden kunnen gebeuren op mijn werk.

Prom2 Ik denk vaak na over hoe ik successen kan behalen op mijn werk.

Prev3 Ik richt mijn aandacht meer op het voorkomen van problemen dan et behalen van mijn doelen.

Prev4 Ik zie mezelf als iemand die er veelal naar streeft om te voldoen aan mijn verplichtingen en verantwoordelijkheden.

Prom3 Ik stel mezelf vaak positieve dingen voor waarvan ik hoop dat ze mij in mijn werk zullen overkomen.

Prev5 Ik denk altijd van tevoren na over mogelijke problemen die in mijn werk kunnen optreden.

Prom4 Ik ben erop gebrand positieve resultaten te behalen tijdens mijn werk.

Prom5 Ik ben in mijn werk meer gericht op het bereiken van successen dan het voorkomen van falen.

Deel 3 – De organisatie

Het laatste deel van deze vragenlijst bestaat uit stellingen met betrekking tot uw organisatie. We vragen u aan te geven in hoeverre u deze van toepassing vindt op uw organisatie.

Deel 1/3

CH1 Hier streven de meesten ernaar goed werk te leveren.

CH2	De werksfeer geeft zin om er volledig voor te gaan.
IT1	We nemen soms de tijd of onderbreken het werk om nieuwe ideeën te proberen.
D1	Tijdens een discussie worden er hier veel verschillende standpunten uitgewisseld.
IS1	Men kan hier rekenen op steun en aanmoediging wanneer men met nieuwe ideeën komt.
D2	Meningsverschillen worden hier vaak geuit.
CI3	Men vindt dat zijn/haar bijdrage zinvol is.
IT6	Een flexibele planning laat hier toe verschillende alternatieven te overwegen.
IS2	Men staat hier meestal open voor mensen die met nieuwe ideeën komen.
R1	Men kan hier doorgaan met werken, zelfs wanneer men met onzekerheden wordt geconfronteerd.

Deel 2/3

CI4	Men zet zich hier voor honderd procent in voor zijn/haar werk.
CI5	Functioneren in deze omgeving is uitnodigend en boeiend.
IT2	Er is hier tijd om nieuwe ideeën te verkennen.
D3	Men wisselt hier vaak tegengestelde standpunten uit.
CI6	Men streeft er hier naar de kwaliteit van het werk te verbeteren.
R2	Men durft actie te ondernemen, zelfs wanneer men niet duidelijk weet waartoe deze leidt.
IS3	Men verwelkomt hier meestal nieuwe ideeën.
CI7	Men zet zich hier in om problemen op te lossen
IT3	Men krijgt hier voldoende tijd om over zijn/haar ideeën na te denken.
D4	Er wordt hier vaak een grote verscheidenheid aan standpunten geuit.

Deel 3/3

R3	Men waagt zich hier vaak op onbekend terrein.
IT4	Het werktempo hier laat het proberen van nieuwe ideeën toe.
IS4	Men deelt hier in het algemeen zijn/haar plannen met anderen omdat er naar hen geluisterd wordt, en men aangemoedigd wordt.
D5	Hier worden vaak verschillende standpunten besproken.
R4	Men introduceert hier graag nieuwe voorstellen, zelfs als ze niet getest zijn.
IS5	Initiatieven kunnen hier vaak rekenen op een positieve reactie, zodat men zich aangemoedigd voelt om nieuwe ideeën te genereren.
D6	Het is hier mogelijk om verschillende ideeën en opinies te bespreken.
IT5	De meesten hebben hier tijd om nieuwe ideeën te overdenken.
R5	Men voert hier veranderingen door, ook al zijn de resultaten onzeker.
CI8	Men is hier oprecht geïnteresseerd in het werk.

Bedankt voor uw deelname.

Hebt u verder nog opmerkingen, vragen of suggesties, laat ze achter ter feedback.

Mocht u het resultaat van het onderzoek willen ontvangen, laat dan uw e-mailadres achter.

Table 6

Means and Standard Deviations for characteristics of a respondents' ideal colleague (n = 131).

Characteristic	Rating	
	M	*SD*
Reliable	4.85	.47
Sincere	4.82	.49
Responsible	4.68	.62
Determined [a]	*4.40*	*.73*
Logical	4.38	.61
Practical	4.31	.55
Appreciative	4.15	.76
Good-natured	4.13	.75
Understanding	4.05	.62
Tolerant	3.92	.72
Progressive	3.67	.79
Nonconformist	3.26	.90
Takes chances	3.21	.71
Emotional	2.90	.69
Likes to be alone when creating something new	2.87	.88
Impulsive	2.85	.63
Individualistic	2.60	.85
Tends not to know own limitations and tries to do what others think is impossible	2.53	1.01
Makes up the rules as he or she goes along	2.44	1.00
Dependable	2.21	.72

Note. [a] Creative attributes are printed italic.

Table 7

Means and Standard Deviations for characteristics of a respondents' creative colleague (n = 131).

Characteristic	Rating	
	M	*SD*
Sincere	4.29	.76
Determined [a]	4.28	.74
Takes chances	4.05	.89
Progressive	4.00	.89
Impulsive	3.92	.80
Reliable	3.89	.98
Good-Natured	3.78	.77
Nonconformist	3.78	1.02
Makes up the rules as he/she goes along	3.69	1.11
Responsible	3.69	1.04
Appreciative	3.64	.86
Tolerant	3.56	.93
Tends not to know own limitations, and tries to do things others think are impossible	3.55	1.28
Emotional	3.54	.78
Practical	3.51	1.11
Understanding	3.49	.83
Reasonable	3.44	.92
Individualistic	3.29	1.03
Likes to be alone when creating something new	3.25	1.02
Dependable	2.15	1.08

Note. [a] Creative attributes are printed italic.

Table 8

Dimensions Situational Outlook Questionnaire, Factor loadings of a PAF analysis (Promax) (n = 131).

Theoretic dimension	Factors				
	1	2	3	4	5
Challenge and Involvement					
CI1	.647				
CI2	.714				
CI3	.498				
CI4	.939				
CI5	.788				
CI6	.505				
CI7	.330	.342			
CI8	.729				
Idea-Support					
IS1		.883			
IS2		.810			
IS3		.677			
IS4		.535			
IS5		.819			
Debate					
D1			.556		
D2			.358		.465
D3			.821		
D4			.937		
D5			.625		
D6		.576			
Idea-Time					
IT1		.465			
IT2		.407		.400	
IT3				.776	
IT4				.545	.302
IT5				.880	
IT6	.314				
Risk-Taking					
RT1		.351			
RT2	.381				.407
RT3					.381
RT4		.448			.424
RT5					.632
Eigenvalues	12.500	2.486	1.873	1.331	0.988
% variance accounted for	41.7	8.29	6.2	4.4	3.3

TWO FIELDS OF KNOWLEDGE: SOCIOLOGICAL AND PSYCHOLOGICAL PERSPECTIVES TOWARD CREATIVITY.

Since this research is verging on both sociological and psychological perspectives towards creativity, some attention may be paid to the differences and similarities that exist between these fields of social sciences. According to the American Sociological Association (ASA) and the American Psychological Association (APA), both departments seem to include the other in their field. ASA names sociology to be "an overarching unification of all studies of humankind, including history, psychology, and economics" (www.asanet.org), whereas APA claims psychology to be the "general understanding of behavior". Nevertheless, many scientist exert an unbridgeable gap between the two disciplines. In this paragraph, I want to point out both sociological and psychological understandings of creativity, and the way the gaps are bridged in this research. But first, to clarify: in the past, *creativity* is looked at thru two different lenses. To some extent, it is seen as extraordinary. In this view, a few creative people are distinguished from the 'mass of non-creative people' (Fox, 2011). On the other hand, creativity can be looked at as an everyday activity, a more common trait than creativity in the former view (Amabile, 1997). According to Thompson et al. (2007), creativity, in this second view, is an aspiring characteristic that all people can possess, which should be encouraged like an engine of progress. This latter view is the lens that is used throughout this project; creativity in the day-to-day manner, creativity seen as a way to solve problems, creativity as practiced in most modern organizations. Thus, although creativity was not explicitly measured, this broad model will work through the project.

The argument about the power of creativity is a particular young one within the expertise of social sciences – called one of 'psychology's orphans' barely fifteen years ago (Sternberg, 1999), and even more under-theorized within the sociological field. Yet, it recently became a key topic in organizational sciences (Kaufman et al., in Mann & Chan, 2012). This should not be surprising; it has been named as the most important economic resource of this century (Florida, 2002), and is seen as essential for organizational success (Agars, in Mann & Chan, 2012). Egan (2005) argues that creativity is an economic force powering many of the seemingly unrelated trends, changing the way we work and live.

The Gap

The psychology of creativity is as widespread as the field of psychology itself – it has been covered in areas from brain activity and cognitive processes, personality traits and more recently in the applied

sciences of organizational psychology. Using a psychological lens, creativity is not just powerful because of the economic resources it fosters – also factors of well-being are influenced by creativity. Florida and Goodnight (2005) investigated an institute SAS, which is leading in encouraging creativity. This institute shows a turn-over rate of just 5 percent, compared with an industry average of 20 percent, and has particular happy employees. A comparable link between happiness and creativity is named by Csikszentmihalyi (1997); creativity, and the accompanying sense of discovering new things, is a factor often named by people to enhance happiness, thus 'leading to a fuller, more satisfying life'.

A different angle on creativity within the Psychological field, is the question; who is creative? Unmistakably, creativity was found to be correlated with IQ (r = .17) in a meta-analysis of 21 studies (Kim, 2005). It is worth noticing that creativity has recently been included as a component of most modern theories of intelligence. This also fits the below described 'creative class'; the highly educated creative professionals. However, the question that was addressed in this research is more about personality traits that are associated with creativity. Westby and Dawson (1995) compared previous research, finding, among others, the traits of being impulsive, nonconformist, emotional, progressive, determined and individualistic as traits characterizing a creative person. Opposed to the traits that are not typical of creative persons: tolerant, practical, reliable, dependable, responsible, logical or understanding.

If one switches to a sociological lens, and studies the role of transitions in society, the role of creativity became more important over the last few decades, once transitions from an industrial to a post-industrial society started to take place (Mellander, Florida, Rentfrow, 2012). About half a century ago, the rise of knowledge societies was first recognized (Drucker, in Mellander, 2012). Drucker referred to this process by indicating workers who were paid to understand how to apply knowledge as a productive tool, creating new approaches to problems, by Florida (2012) also called the 'creative professionals'. Florida then indicated the rise of this new class, the *creative-class*, as a characteristic of post-industrial societies. This class plays an increasingly important role in the globalized world – it is the force behind innovation, a source of wealth for countries characterized by their transmission towards a post-industrialist society.

These transitions can be seen as related to the problem of rationalism – according to Ultee, Arts and Flap (2003) one of the main questions addressed in sociology. The problem of rationalism is centered in a changing society; it started off in the beginning of twentieth century as the change towards capitalism. Markets were seen as operating freely, associated with the supposedly rational individual navigating through these markets. In this process of rationalizing, the attitude towards creativity changed. Seen as something irrational at first, in these changing societies, creativity and new ideas are needed by firms to survive – showing a change towards a rationalized creativity – creativity is a strategic advantage (Fillipi, Grabher, & Jones, 2007).

Summarized, both disciplines exert a totally different perspective towards creativity. Though at different levels of reasoning, both fields recognize the importance of the concept. Above the

perspectives upon the concept are discussed, however, I believe that the concept of creativity bridges different fields of science from within.

The bridge

The gap between a sociological and psychological understanding of creativity as illustrated above, is in part bridged by the concept *creativity* itself. Creativity, per definition impossible to grasp or understand, has been approached from numerous angels in several fields of science. The research conducted to understand the causes and consequences of creativity all try to rationalize the concept. Psychology tries to distinct the creatives from the non-creatives, sociology tries to capture the environments that foster creativity. However, creativity in itself is untouchable for all fields of research. As Beckert's thesis (2002, in Shook, & Margolis, 2008) suggests, is creative action superior to the rational action models. At most, indicators that make the emergence of creative ideas more likely can be distinguished, but an 'on' button of creativity does not exist. In my opinion, this ambiguity fosters a fusion of the social sciences regarding this topic. It does not matter who is researching creativity, none of the fields will touch upon it (Filippi, Grabher).

A second component within creativity that in my opinion bridges different fields of science regardless of their different beliefs is its' role in gaining knowledge. Regarding knowledge, at least one statement can be derived with regards to creativity. The first is that research might be conceptualized as 'creatively linking knowledge in order to gain knowledge'. Creativity, defined as a new idea that has value in solving a problem, thus is a prerequisite for all research. As argued by DeHaan (2009), the scientific field would stagnate if researchers would not be creative in advancing their knowledge.

To conclude, I want to state that although creativity seems to be one of the most untouchable topics, we should enhance the belief that all people have a creative potential that can be fostered. Which method best fosters creative thinking within organizations, is a field that research can explore, as current project aimed to contribute to. As Csikszentmihalyi (1996) points out, 'it is easier to enhance creativity by changing conditions in the environment than by trying to make people think more creatively'. The tension between individual and environment, and the tension resulting from the predefined indefinability of creativity makes it a topic that understandably is receiving increasing attention in the social sciences. These tensions make creativity a perfectly suitable topic to bridge the different convictions of sociology and psychology. As Allais (1993) points out, "Reality is interdisciplinary".